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ARCHAEOLOGY

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VOLUME 10 NUMBER 2

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editorially speaking . . .

DURING THE COURSE OF EXCAVATION in the mounds which occupy most of the editorial desk—a rather extensive area—items are occasionally recovered which seem worthy of mention. One of the major problems we face is finding space for the many interesting articles which come to our office, and we begrudge even a single page for such non-essentials as editorial pronouncements. When publishing a magazine silence is literally golden, and we break our silence only for the reader's benefit.

THIS TIME WE SHOULD LIKE to say a word on the matter of reprints. During the last few years any number of popular books on archaeology have seen the light. *Gods, Graves and Scholars* was not the first, but it was perhaps the most successful in capturing the popular imagination and in interpreting archaeology for the general reader. Once the formula was discovered, others attempted to use it, with varying success. Excellent books of this sort have recently appeared, many of them written by practising archaeologists who know the material at first hand.

Along with these new books, written specifically for the general reader and up to date in their information, a great many reprints of earlier volumes are now being put out by publishers anxious to benefit from popular interest in archaeology. While most of these books were written by capable authorities, some were written a long time ago. Even though archaeology is all about "dead civilizations" it is a field in which things move fast. If a book published as long as twenty or even ten years ago has not been thoroughly revised, the reader is more than likely to be misled. We recommend that when choosing a book the purchaser look for the date of first printing. If the book is not new, one should examine the preface for a statement that it has been revised for the new edition. It is only in this way that one can be sure to get the correct and authoritative information.

OTHER SIGNS OF INTEREST in the ancient world appear in the continuing growth of **ARCHAEOLOGY**'s circulation, in the recent printing of five thousand more copies of "Archaeology as a Career" (the total number issued is now 20,000) and in the steady increase in the number of local societies of the **ARCHAEOLOGICAL INSTITUTE OF AMERICA**. With the admission of the Kansas Society in December 1956 the Institute's family now numbers forty-five. These local societies are fairly well distributed throughout the United States (there is also one in Canada) and anyone, amateur or professional, is welcome to join. Membership in a society affords an opportunity to meet people of like interests and to attend a number of illustrated lectures given each year by prominent archaeologists. If there is no society near your home the Institute will be glad to help you form one. Write to the General Secretary (608 University of Cincinnati Library, Cincinnati 21, Ohio) for information.

A NEW FILM HAS BEEN ADDED to the series being produced by the AIA's Television and Film Committee. Called *From the Remote Past of Greece*, it gives the background for the dramatic decipherment of the Minoan Linear B script. Beginning with a brief picture of the glories of the ancient Minoans and passing to highlights of the Mycenaean culture which followed, the story proceeds to the tablets found at Knossos, Pylos and elsewhere and demonstrates graphically how the script is read and interpreted as the earliest form of Greek.

Institute members will be pleased that this film is being sponsored by their own organization, and everyone will be fascinated by the skilful way in which the remarkable story is told. The film, which is in color, runs for seventeen minutes. It uses some of the footage taken by Ray Garner in the course of making his larger film, *Greece*. Other photography was contributed by Marion Rawson and Byron D. MacDonald. The director is Casper Kraemer; the script was written and narrated by Jotham Johnson, who appears in person; the producer is Tom Conlon Associates. The film is distributed by the New York University Film Library, 26 Washington Place, New York 3, N. Y. Inquiries about rentals and purchases should be addressed there.

The Rise and Fall of Hazor

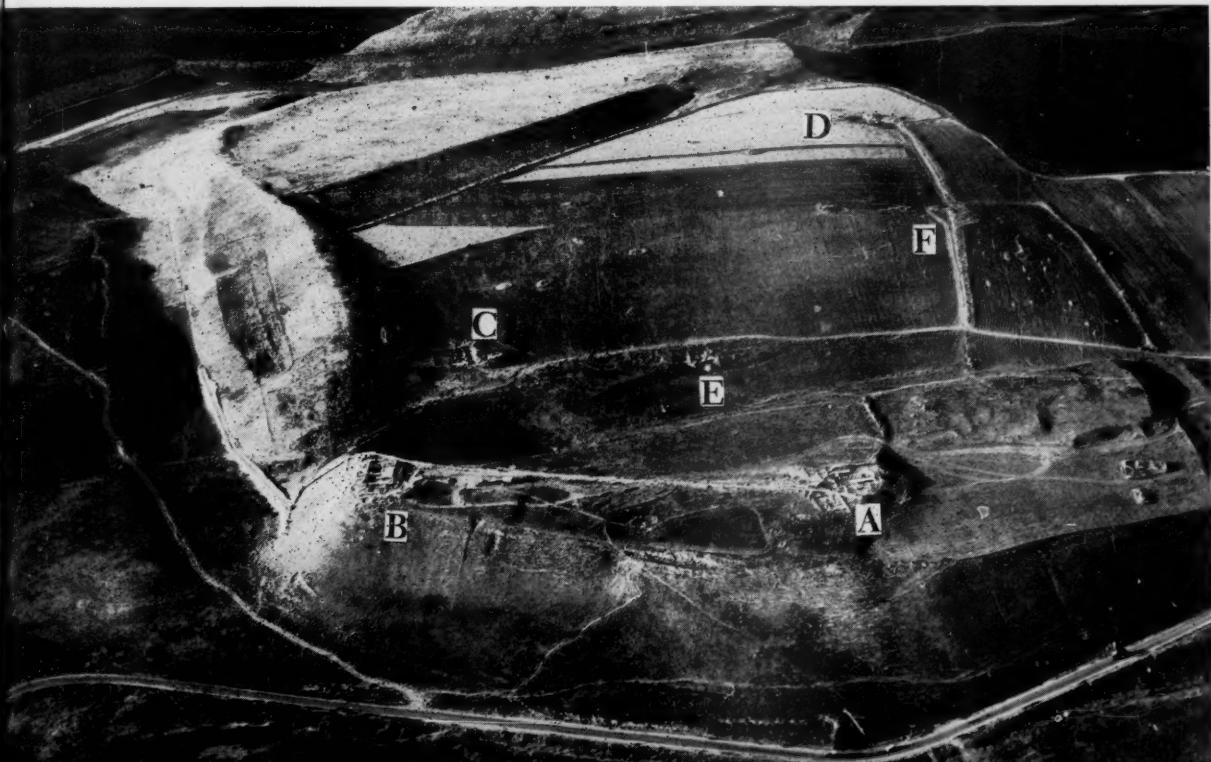
By YIGAEL YADIN

STRANGE AS IT MAY SEEM, practically nothing was known about the Canaanite and Israelite cultures of Galilee until we began excavations at the site of ancient Hazor. Hitherto, the bay of Haifa on the west and the Sea of Galilee on the east were the northern limits of archaeological activity in Palestine relating to those periods. This fact alone was sufficient reason for excavating at Tell el Qedah, a large mound nearly nine miles north of the Sea of Galilee and five miles southwest of Lake Huleh; but our attention was attracted to the site for two other important reasons: first, its shape, size and location; second, its probable identification as the city of Hazor.

The mound lies at the foot of the eastern ridge of the Upper Galilee mountain range, in one of the most strategic areas of ancient Palestine—dominating the main highway from Egypt to Mesopotamia, Syria and Anatolia.

The site comprises two distinct areas: the tell and a large rectangular plateau (Figure 1). The tell is a bottle-shaped mound more than six hundred yards long, its "neck" to the west and its "base" to the east, with an average width of about two hundred yards. It is unusually large—more than twenty-five acres in area. Its steep slopes rise from the surrounding wadis (river beds) to a height of about forty yards. The large rectangular plateau, nearly three quarters of a mile long, with an average width of 750 yards, lies immediately north of the mound. It, too, rises from three wadis and ravines on the north, east and south sides, and its steep slopes are strengthened by the addition of glacis, or supporting walls. The western side of the plateau was especially protected by a large wall of beaten earth which still rises to a height of about fifteen yards. At its base this wall is about one hundred yards thick. Outside it and parallel to it is a large moat. The whole area is thus a well fortified enclosure. This type of site, large in area and

1. Air view of Hazor, showing the six areas excavated during 1955 and 1956.



fortified by beaten earth wall, glacis and moat, is quite rare. Only Carchemish and Qatna are comparable in character and in size. This fact led the late archaeologist John Garstang (who first identified Tell el Qedah as ancient Hazor) to suggest that the "camp enclosure was large enough to accommodate in emergency 30,000 men with a corresponding number of horses and chariots."

IN EARLY TIMES Hazor was undoubtedly a city of high importance. Apart from numerous biblical references, it is one of the few Palestinian cities of antiquity mentioned in pre-biblical literary documents from Egypt, Palestine and Mesopotamia. Hazor is even mentioned in the Egyptian Excretion Texts of the nineteenth century B.C. These texts list potential enemies in the distant provinces of the Egyptian empire. Two recently published cuneiform letters from the important archives of Mari—modern Tell Hariri on the Middle Euphrates—written about 1700 B.C., inform the king of Mari that messengers from various cities in Mesopotamia are on their way to Hazor. Another letter tells the king that a caravan has arrived from Hazor and Qatna, accompanied by Babylonian envoys. In still another letter (as yet unpublished) Hazor seems to be referred to as a horse-breeding center.

Hazor is later mentioned among the cities conquered by the Pharaohs Thutmose III, Amenhotep II and Seti I. An interesting allusion to Hazor is found in the famous Papyrus Anastasi I (thirteenth century B.C.). Hori, a royal official, challenges Amen-em-opet, the scribe, to answer a number of military and topographical questions.

Perhaps the most important references to Hazor are in the famous Amarna letters (fourteenth century B.C.) from vassal rulers to Egyptian kings. In four letters Hazor is the subject of the correspondence. In two letters the

• The James A. de Rothschild Expedition at Hazor has been operating for two seasons (1955, 1956) on behalf of the Hebrew University, Jerusalem, with funds contributed by the Anglo-Israel Exploration Committee, the Palestine Jewish Colonization Association and the Government of Israel. The excavations, under Dr. Yadin's direction, have been conducted with a professional staff of about forty-five and as many as two hundred laborers. The principal assistants were Dr. Y. Aharoni, Mrs. R. B. K. Amiran, Mrs. T. Dothan, Mr. M. Dunayevsky, Miss C. Epstein, Mr. M. Megiddon and Mr. J. Perrot.

Dr. Yadin was born in Jerusalem in 1917; he received the M.A. (1945) and Ph.D. (1955) degrees from the Hebrew University, and is now Lecturer in Archaeology at that institution. His experience in organization is military as well as archaeological—during 1947-49 and 1949-52 he was Chief of Operations and Chief of Staff of the Israel Defence Forces. Dr. Yadin's publications include a book on two of the Dead Sea Scrolls, *The War between the Sons of Light and the Sons of Darkness*, and *A Genesis Apocryphon*, as well as numerous articles in scholarly journals.

Photographs by J. Schweik and A. Volk. Color photograph on the cover by the author.

kings of Tyre and Astaroth, respectively, complain that Abdi-Tarshi, king of Hazor, had rebelled against the Pharaoh and captured several of their cities. The other two letters are from the king of Hazor, denying the charges.

But it is in the Bible that Hazor really comes into its own as a key city of strategic importance, according to the book of Joshua and the Deborah narrative in Judges. The victory of Joshua by the "waters of Merom" marks a decisive phase in the conquest of northern Canaan: "And Joshua at that time turned back, and took Hazor and smote the king thereof with the sword: for Hazor before-time was the head of all those kingdoms . . . and he burnt Hazor with fire" (Joshua 11:10, 11). Later, during the period of the Judges, it was against Jabin, another king of Hazor, that the Israelites had to fight. "And the Lord sold them into the hand of Jabin king of Canaan, that reigned in Hazor, the captain of whose host was Sisera, which dwelt in Harosheth of the Gentiles" (Judges 4:2). And they went to battle under the inspiration of Deborah and the command of Barak, "And the hand of the children of Israel prospered, and prevailed against Jabin the king of Canaan, until they had destroyed Jabin, king of Canaan" (Judges 4:24). This battle, which took place in "Taanach by the waters of Megiddo" (Judges 5:19), marks the beginning of the final phase of the subjugation of the Canaanites.

Two later biblical passages mention Hazor. Solomon rebuilt Hazor and Megiddo and Gezer (I Kings 9:15), the three strategic cities dominating the plains of Huleh, Jezreel and Ayalon (modern Latrun), making them royal cities, apparently garrisons for his hosts of chariots. The last we hear of Hazor in the Bible concerns its capture in 732 B.C. by Tiglath Pileser III, king of Assyria.

The latest historical reference to Hazor is in I Maccabees (11:67), where we are told that Jonathan the Hasmonean fought against Demetrius (147 B.C.) "in the plain of Hazor."

Professor Garstang was prompted to make his soundings in Hazor (in 1928) by his desire to fix the date of the Exodus and the occupation of the country by Joshua. Unfortunately, apart from a brief description in his famous book *Joshua, Judges*, the results were never published in detail. Garstang's main conclusion was that during the fifteenth century B.C.—the period in which he believed the story of Joshua began—the camp-enclosure "was apparently occupied only by temporary structures." He concluded, moreover, that during the fourteenth and thirteenth centuries Hazor's days as an important city were past—while most scholars held that it was precisely during this period that the main phase of the Exodus and the conquest of Canaan occurred. Garstang based his

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2. The public building (Area A) with two rows of pillars, each over six feet high, built during the reign of King Ahab (874-852 B.C.). This view looks toward the south. In the foreground can be seen a paved open court, an annex to the main building.



opinion on "the complete absence of Mykenaeian specimens" (page 383), for Mycenaean pottery appears in this part of the world only after about 1400 B.C. and disappears at the end of the thirteenth century.

A ROW OF NINE MONOLITHIC PILLARS discovered by Garstang in a very narrow trench which he dug in the center of the mound was the starting point for the excavation of Area A. Garstang thought that the pillars were part of a stable of the Solomonic period but this proved incorrect. It is now known that these pillars, as well as a similar, parallel row, were originally part of a large public building (Figure 2) of the time of Ahab (874-852 B.C.). Above the original floor level (Stratum V) there is evidence for four subsequent architectural phases, in all

of which the pillars were reused in a variety of ways. Strata III and II embodied them within their walls or demolished those which interfered with their architectural plans. Stratum I used the tops of the pillars as part of the floors. This stratum, nearest the surface, contained the remains of a town dating to the late eighth and early seventh century B.C.—a modest settlement built on the ruins of an earlier city (Stratum II) which had clearly been destroyed by fire, for the roofs of its houses had fallen in. Many beautiful vessels of basalt and pottery which were found intact and still in their original places suggest that the population fled in haste and did not return. The date of the destruction, ascertained through the pottery, was the second half of the eighth century B.C. We therefore assume that this was the city known to have been destroyed by Tiglath Pileser III in 732 B.C.

We found that the public building in its original form had two periods of occupation, the first (Stratum V) in the reign of Ahab and the second (Stratum IV) during the times of his successors. It may have served as a storehouse of the type mentioned in II Chronicles 16:4 "And Ben-hadad . . . sent the captains of his armies against . . . all the store cities of Naphtali."

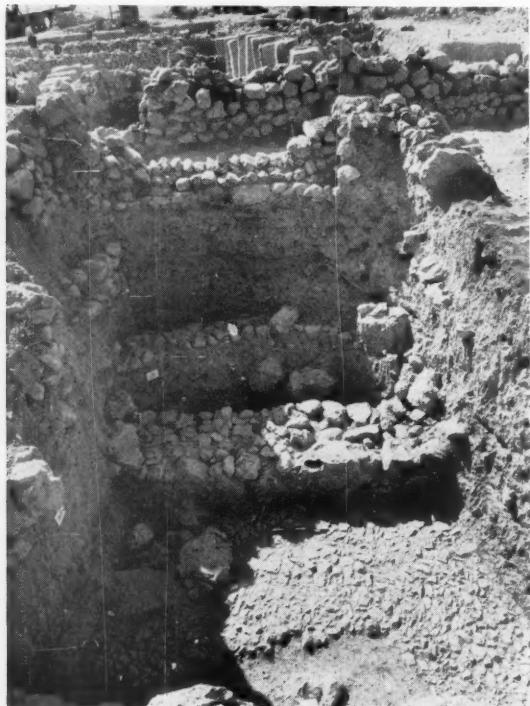
In the city of the third stratum, which contained typical ninth and eighth century pottery, we found the first Hebrew inscriptions discovered in Galilee from the period of the kings of Israel. The buildings of Stratum III belonged to wealthy merchants of the time of King Jeroboam II (786-746 B.C.), and in one of these were two jar fragments bearing inscriptions in the old Hebrew script, one incised, the other painted. The first inscription (Figure 3)



3. Jar fragment with an inscription in the old Hebrew script incised on it. It reads: "Belonging to Makbiram." This unique sherd was found in the ruins of an eighth century B.C. house.

The Rise and Fall of Hazor continued

5. Trial trench in Area A showing Strata VI-VII-VIII, below Stratum V (the pillared building of Ahab's time). All the strata date to the Iron Age, ranging from the time of the Judges down to the period of the Divided Monarchy (ca. 1200-850 B.C.).



4. Ivory cosmetic palette found in the house of Makbiram. On the front is a stylized Tree of Life in relief; on the back is the head of a woman. Two small birds are carved on the narrow sides, on each side of the woman's face. Length 4 3/4 inches.

reads **LMKBRM**, "belonging to Makbiram." This Hebrew name is hitherto unknown. The second inscription, unfortunately incomplete, might be read as:

YRB'A (= Jeroboam?)
BN'ELM (= the son of Elmatan or Elimelekh)

In the same house (which we called the house of Makbiram) we also found a beautiful ivory cosmetic palette (Figure 4). The walls of this house had been heavily damaged by an earthquake. Could it have been the earthquake referred to in the Book of Amos: "The words of Amos . . . which he saw concerning Israel . . . in the days of Jeroboam the son of Joash king of Israel, two years before the earthquake"?

Below the large building there are at least three more Iron Age strata (Figure 5). All eight strata are included within a period of about five hundred years and supply important pottery material datable within a narrow time range.

East of the large building we discovered, in Stratum VII, a well constructed city wall with casemates, probably built by King Solomon. The fact that the wall crossed the center of the mound from north to south suggests that Solomon built a garrison city on only part of it (I Kings 9:15). This wall was later abandoned when the city expanded eastward, and the casemates were turned into workshops and living quarters. In one casemate we found about twenty jars, covered by the fallen roof, which had contained wine or oil.

To establish the relationship between Stratum VII and the latest Canaanite city (thirteenth century B.C.) we cut



6. The fort of the Assyrian occupation which was restored during the Persian period; in the center is the south hall which—together with a similar hall on the north—flanked the central court. In the background are the mountains of Upper Galilee.

a deep trench east of the casemated wall. This showed that between the Solomonic and the Late Bronze cities there was at least one other stratum belonging to the first centuries of the Early Iron Age, that is, between 1200 and 930. Next season, when this trench is enlarged and the exact date of the intermediate city is fixed, it will be possible to decide the relationship between the capture of Hazor attributed to Joshua and that which, according to Judges, took place at the time of Deborah, around 1100 B.C.

THE MOST STRONGLY FORTIFIED POINT was at the western tip of the mound. It was here (Area B) that we discovered in 1955 a series of citadels, the latest belonging to the Hellenistic period and the oldest to the Assyrian, later reconstructed in the Persian period, during the fifth or fourth century B.C. The Assyrian fort (Figure 6) was in the form of a square. It consisted of a central open court flanked on north and south by oblong halls, with a row of small rooms all around. The later reconstruction of the building included the erection in the northern hall of a partition wall containing many niches and several crude mangers. This suggests that the fort then served a small cavalry garrison.

Although this fort was well preserved, we decided in 1956 to remove it in the hope of uncovering the citadel of the Israelite period. We were amply rewarded for our decision: below the later building was a most imposing citadel composed of two parts. In the south was the fort proper, and north of it an annex containing living quarters. The plan of the fort is simple: a square with a row

of square rooms on the north and south sides, and two long, narrow halls in the center. The fort has very solid walls (up to six feet thick) which occupy about forty per cent of its total area, and very deep foundations, in some places extending to about nine feet below the floor. The corners of the building are formed by imposing ashlar blocks, some almost five feet long. But the most interesting feature of this area is the evidence of the terrific destruction which befell it. All the rooms were covered with a layer of ashes about three feet thick; the stones were all black, and numerous charred planks and fragments of plaster from the ceiling were scattered all over. The eastern side—the direction from which the fort was attacked—had been destroyed to such an extent that at some places only the foundations remained. What living evidence of the destruction described so vividly by the Psalmist (137:7): "Rase it, rase it, even to the foundation thereof"!

The type of pottery found on the floors indicated quite plainly that this was the destruction wrought by Tiglath-Pileser III—a tragic illustration of the laconic biblical description of this event (II Kings 15:29): "In the days of Pekah king of Israel came Tiglath Pileser, king of Assyria, and took Ijon, and Abel-beth-maacah, and Janoah, and Kedesh, and Hazor, and Gilead, and Galilee, all the land of Naphtali, and carried them captive to Assyria." A brief inscription on one of the wine jars discovered in the citadel adds an intimate touch: **LPQH**, "for Pekah." The kind of wine was indicated, too: **SMDR**, that is, *semadar*. This word, which occurs three times in the Song of Songs, has been translated as "tender grape." "The



7. Impression of a cylinder seal of Syro-Hittite type, found in Area B. A procession of gods, each with his typical emblem, is shown. Ca. thirteenth century B.C.

fig tree putteth forth her green figs, and the vines with the *tender grapes* give a (good) smell" (2:13).

Among the many interesting objects found in this area is a small ivory box of Samarian style [shown on the cover] with delicate carving representing (at the left) a cherub and (at the right) a figure kneeling before the Tree of Life. Also here was found an incense ladle of local marble bearing a beautifully carved hand on the under side, the fingers grasping the bowl. These discoveries were from the last phase of occupation, during the reign of King Pekah. We found ample evidence, however, that the citadel was first built much earlier, probably in the time of Ahab. The early cylinder seal (ca. thirteenth century B.C.) shown in Figure 7 was apparently discovered and used by the Israelites centuries later.

In the southwest corner of the large rectangular enclosure on the plateau, close to the beaten-earth wall, we excavated Area C. Here we had the threefold objective of verifying the nature of what Garstang called the "camp area," ascertaining the date of its last occupation, and determining just how the earth wall had been constructed.

The discoveries here were startling. Three feet below the surface we found the remains of a well built city, with houses and a system of water channels. And much to our surprise, we found the floors of these houses littered with Mycenaean pottery and with vessels of local make, all dating to the last phases of the Late Bronze Age—the thirteenth century B.C.! In other words, here was definite proof that the last city in this enclosure met its end at the time considered by most scholars as the period of Joshua's conquest. There is not yet proof that the city was destroyed by Joshua; such an assumption must be tested by excavation. But certainly one of the obstacles to the theory that Joshua conquered Hazor was Garstang's belief,

based on the absence of Mycenaean pottery, that the city had been destroyed about 1400. This difficulty has now been removed.

To establish the date of the earliest occupation of the enclosure, in 1956 we removed Stratum I (the latest city) in the area excavated the previous year. Below it appeared another city (Stratum II), dating to the fourteenth century B.C., approximately the Amarna period. Removing this, we reached still another city (Stratum III)—after a gap corresponding to Late Bronze I (fifteenth century B.C.)—which appears to be built on virgin soil, and thus must be the oldest. This city, from the last phase of the



8. An infant burial in a jar beneath a house floor. Near the skull is a small jug. Middle Bronze Age.



11. Basalt statue of the deity from the Canaanite sanctuary. He is seated on a throne and holds a cup. Height 17 $\frac{3}{4}$ inches.



9. The "Holy of Holies" of the Canaanite temple, as first discovered. At left is a seated deity, beside him a row of stelae, with the offering table in front. The orthostate block with a lion carved in relief was found below the stela lying at the extreme right.

The
Rise
and
Fall
of
Hazor *continued*



10. Another view of the Canaanite "Holy of Holies" as it appeared at a more advanced stage of excavation. The lion orthostate block can now be seen.



12. Basalt orthostate block with a crouching lion carved on it in low relief, found in the Canaanite sanctuary. Height 11 $\frac{3}{4}$ inches.

Middle Bronze Age (late eighteenth to early sixteenth century B.C.), had been destroyed by fire, probably by one of the New Kingdom pharaohs, Amenhotep II or more probably Thutmose III. A pathetic sight appeared below the floors of its houses—scores of infant burials in jars (Figure 8). Each jar contained a skeleton and one or two juglets which might have held water or milk; in some cases the jars contained two infants. This method of burial is known from other contemporary sites, but the great number of burials in each room—some obviously deposited at the same time—might indicate an epidemic.

The most important discovery of all occurred within the last fortnight of the 1955 campaign. Two small Canaanite temples of the Late Bronze period, one on top of the other, were found at the foot of the beaten-earth rampart. In a central niche, high above the floor, we found the "Holy of Holies" (Figures 9, 10). Here was a basalt statue of a male deity seated on a throne, holding a cup (Figure 11). A row of stone stelae stood to the left of the figure. Seven of the stelae are plain, but one bears a simple, effective design: two hands stretched upward, as if in prayer, toward a sun disc within a crescent. To the left of the stelae we found a basalt orthostate block bearing the figure of a lion in relief on the front and side (Figure 12). This sanctuary group is unique in Palestine, and in many respects also in the entire Near East. Although Hittite influence is clearly visible, the sculpture is Canaanite in execution and detail. The many vessels found nearby point to a date in the thirteenth century B.C. Here we have a most striking example of Canaanite art, of which so little has been known up to now.

In 1956 we continued to dig in this area and were well rewarded. Near the sanctuary was disclosed another room, full of stelae thrown down in disorder and lying in heaps. Was this a storeroom or had the stelae been cast there by the conquerors? This we do not yet know. While clearing this section we discovered a remarkably intricate system of stone walls and buttresses supporting the lower slopes of the earth wall—some dating to the Middle Bronze period (eighteenth-seventeenth century B.C.) when the wall was built, and some to the Late Bronze period, in the final phases of occupation.

We also enlarged our excavation to the north. Here appeared many interesting finds. The whole vicinity of the sanctuary was occupied by storerooms full of big jars as well as potters' workshops, all probably connected with the sanctuary. In one of the potters' shops we discovered a complete potter's wheel (made of two basalt blocks) still in place, with one of the last objects the potter made before he had to flee—an unusual cult mask (Figure 13). In the potter's storeroom we discovered about forty complete vessels: chalices, bowls, lamps and little jugs.

But the greatest prize was still to come. In the store-room, hidden below a heap of bowls and placed in a specially prepared jar, we found a cult standard (Figure 14). This is a bronze plaque, with a tang for fastening it to a pole (Figure 15). The face of the standard, which is plated with silver, bears an image of the snake-goddess holding a snake in each hand; above is her emblem—a crescent and a conventionalized snake. This standard, obviously one of the treasures of the sanctuary, was probably carried in the cult procession.

DURING 1955 TWO OTHER SECTIONS within the rectangular enclosure (Areas D and E) were excavated. Our aim was to determine whether the situation in Area C was characteristic of the whole enclosure, and indeed it was. In both areas we found the same features: the latest buildings, of the thirteenth century B.C., were built upon older settlements, the earliest dating to the Hyksos period (eighteenth century). Many cisterns were discovered, some as deep as thirty feet. These had been used later as burial chambers or as silos, and they yielded a rich harvest of pottery (Figure 16) and scarabs. The most important single object found in Area D was a small fragment of a jar (Figure 17) bearing two letters: 'LT in the Proto-Sinaitic alphabet—the alphabet from which were evolved the old Hebrew script and later the Latin alphabet. This is the first time that this script has been found in Galilee and the date of the jar (thirteenth century B.C.) is close to that of a similar fragment, found some years ago at Lachish by the late J. L. Starkey, which bears an inscription ending with the word 'LT = Goddess.

In 1956 a fourth area (F) was excavated within the enclosure of the Canaanite city, a few hundred yards east of Area D. Our starting point here was a large stone block protruding from the ground. This turned out to be a huge altar, weighing about five tons (Figure 18). It was obvious that in the last phase of occupation an attempt had been made to pull the altar down. After clearing away the surrounding earth we could see that in the latest phase (Stratum I) an open canal led to the altar, which stood in the middle of an open court flanked on two sides by a series of large rooms. In these we found many large stone jars, some fine Mycenaean pottery, a stand for incense vessels, a basalt slab, presumably an offering table, and a seated figure of basalt. At the north side of the court was a platform of small rough stones; this probably served as a "high place," or *Bammab*, for the cult. A stand for incense was found on it and a beautiful alabaster vessel lay just south of it, in a built niche.

The whole area was obviously a holy place. The temple may have stood south of the altar, with storerooms and living quarters to the north and south. An interesting fea-

The
Rise
and
Fall
of
Hazor continued



15. The cult standard. This unusual object is made of bronze, the front plated with silver. In the center is represented the snake goddess holding a snake in each hand. Above her head are a crescent and a conventionalized snake; the latter appears again at the bottom of the standard. This is the first object of the kind found in Palestine. Height 6 inches.



14. A potter's storeroom near the Canaanite temple. Below one of the bowls in the foreground was found the cult standard.



16. Mycenaean vase found in Area D. Height 2 3/4 inches.



17. Fragment of a jar bearing two painted letters in the Proto-Sinaitic script. Found in Area D. Thirteenth century B.C.

ture of this area is an intricate complex of underground water channels, sometimes as high as three feet, built of large stones and covered with huge slabs. These channels, which run east-west and south-north, probably belong to an earlier stratum (III)—the last phase of the Middle Bronze. The builders of the Stratum II altar (fourteenth century B.C.) reused them by joining to them a small channel system which emanated from below the altar. The earlier system belonged to a large building complex (with walls about six feet thick) of which not enough remains to restore its plan or to ascertain its exact function. We assume that it was part of a fortified *temenos* (sacred enclosure).

In 1956 the greatest surprise came as usual in the last fortnight of excavation, when we struck an opening in the rock about fifteen feet below the foundation of Stratum III. This opening, which had been closed with huge boulders, led into a tunnel hewn out of the rock, about thirty-six feet long and six feet high. When we explored it we felt that it might have been hewn only yesterday—so well was it preserved. But when we reached the chamber to which the tunnel led we found that debris from the fallen ceiling blocked the outlet. It was dangerous to proceed, but the temptation was too great, so we decided to dig a vertical shaft from above, and at a depth of twenty-four feet we reached the room. By the end of the season we had succeeded in clearing only about eight-

een feet through the length of the room and there was still no end to it. In the meantime another tunnel with many offshoots, about thirty yards long, was discovered nearby, and again it was too dangerous to clear it in a hurry. What was the purpose of these tunnels? The reader will have to join us and wait in patience until next year's dig reveals their secrets.

To summarize briefly what we have learned of Hazor's history from our first two season's work, we know now that the Canaanite city extended over the whole site, that it must have had a population of thirty or forty thousand, and that it was destroyed in the second half of the thirteenth century B.C. On the mound proper cities continued to be built, destroyed and rebuilt throughout the Israelite period, until the last Israelite city (Stratum II) met its end in the year 732 B.C. at the hands of Tiglath Pileser III. Following its destruction by the Assyrians Hazor was no longer a great city, and after a short occupation in the Assyrian period (Stratum I) the mound was abandoned except for a fort at its west end during the Persian and Hellenistic periods.

The results, on the whole, are of the greatest importance and show how apt was the biblical description of Hazor as the capital of Canaan and the stronghold of Israel in the north. There are still numerous problems to be solved; we hope that the next campaigns will find the answers to many of them.



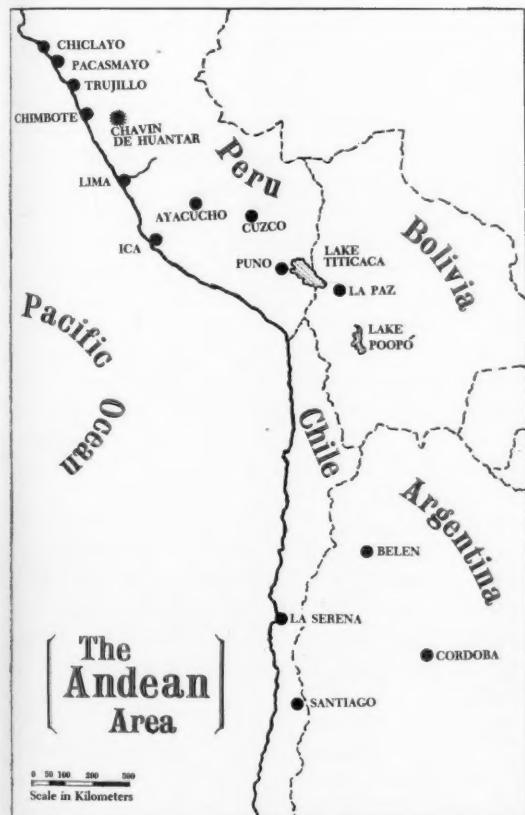
18. The Canaanite altar from Area D, as it appeared when found. Obviously an attempt was made in ancient times to remove it from its platform and to break it up. The altar is a single block of stone which weighs about five tons.

HIGHLIGHTS OF ANDEAN ARCHAEOLOGY, 1954-1956



By RICHARD P. SCHAEDEL

Anthropologist with the Southern Peru Regional Development Program, International Cooperation Administration



1. Map of the Andean area showing the ancient sites mentioned.

Since the appearance of J. Alden Mason's "Peruvian Panorama" (ARCHAEOLOGY 5 [1952] 220-227) and W. D. Strong's review of the Columbia University expedition (*American Antiquity* 19 [1953] 106-107) new developments in Andean archaeology have broadened our knowledge of the prehistoric cultures in the area and have presented a number of new hypotheses (see Figure 1).

If we survey these developments chronologically, new discoveries are to be noted in all the main developmental stages from pre-agricultural to the immediate pre-Colonial epochs. In the field of pre-ceramic investigations the focus has shifted from coastal Peru (where Junius Bird's epoch-making dig at Huaca Prieta in the Chicama Valley still awaits publication of the final results with their trans-Pacific implications) to the Northwest Argentine and Bolivia. Alberto Rex Gonzalez of the Museo de la Plata, aided by Osvaldo Menghin, now of the Museo Etnográfico in Buenos Aires, has made interesting discoveries of the pre-ceramic period in caves of Cordoba, revealing a south highland tradition of points and associated artifacts which promise to show typological links with recently discovered Bolivian material and little known Peruvian highland pre-ceramic assemblages.

Early Formative cultures, especially the Chavinoid manifestations, have been investigated on the Peruvian Central Coast. Frederic Engel has made important stratigraphic cuts in the Curayacu site south of Lima (ARCHAEOLOGY 9 [1956] 98-105). Post-Chavinoid material has been recovered in salvage operations conducted at Ancón, north of Lima, by the Dirección de Arqueología under



2. Partial view of an exposed wall of the adobe pyramid at Licapa, in the Chicama Valley, Peru. The relief design of interlocking fish heads is painted in white on a red base. The preserved portion was probably covered by a flood cap, while the partially destroyed sections were doubtless washed by periodic floods before being covered. By motif analogy and technique of wall decoration it may be assigned to the Formative epoch in the Chicama Valley, corresponding to the Gallinazo phase in Virú Valley to the south. The date would be about the beginning of the Christian era. Photograph by Oscar Lostaunau.



ANDEAN ARCHAEOLOGY continued

the direction of Jorge Muelle and José Casafranca. Both of these investigations will contribute information vital for filling in our sketchy knowledge of the earliest food-producing cultures on the Central Coast and should ultimately provide the origins for the Playa Grande and Maranga cultures (ARCHAEOLOGY 6 [1953] 42-48).

Evidence of Late Formative occupation on the North Coast of Peru has shown up sporadically in the finds of local investigators. The most spectacular was a decorated adobe building in the Licapa site of the Chicama Valley, north of Trujillo. Oscar Lostaunau, Inspector of Monuments for the Jequetepeque Valley, reported and photographed this site before the murals were covered over again (Figure 2).

In the North Highlands, the Chavín de Huántar site itself has been cleared by the patient and careful efforts of Merino Gonzalez, a technician working for the Dirección de Arqueología—and incidentally a native of this archaeologically renowned village. Many of the famous incised stones of the Castillo have been recovered, and new ones have been found. It is interesting to note that recently the natives of the Chavín region, led by their officials carrying their staffs of office, demanded of the local authorities that the work of clearing the Castillo be terminated, as this was responsible for the lack of rain, thus endangering their crops.

South Highland sites of the Early Formative cultures



3. Two vases found in the cemetery in the Hurtado Valley, near La Serena, Chile, by Dr. Jorge Iribarren. At the far left, a red-on-white cylindrical vessel representing stylized camelids (llamas, alpacas or guanacos) and the step-and-triangle design. The camelids suggest affiliation with early ceramic styles of the Northwest Argentine, while the step-and-triangle is the chief stock in trade of the yellow-on-red pottery of Chiripa, Formative culture of Bolivia.

Equally important in indicating possible Chilean-Peruvian connections in the Formative periods is the black-ware vessel, also found at the Hurtado Valley cemetery. It was painted white and red after firing, a technique heretofore associated with Peruvian South Coast cultures, and not known in the intervening areas. Photograph by J. Iribarren.

were mapped and studied in 1954-1955 by the University of California expedition headed by John H. Rowe. Work was concentrated in the area between Ayacucho and Puno. Recently Sr. Casafraña reported upon a Chavinoid (Early Formative) site near Ayacucho.

Far to the south, in northern Chile, Jorge Iribarren has been uncovering more remains of the earliest ceramic culture for the La Serena area, the region between the Copiapo and Choapa rivers (Figure 3). These new finds, of a new "El Molle" phase recently reported by Francisco Cornely, Director of the Archaeological Museum of La Serena (ARCHAEOLOGY 9 [1956] 200-205), indicate the possible affiliations of the pottery tradition of El Molle with those of the Formative stages of the Altiplano cultures and the South Coast Paracas (north of Ica) manifestations. They also tend to confirm postulated connections with the early Northwest Argentine cultures such as Condor Huasi (tied into the cultural sequence of the Haultín or Belen Valley by Alberto Rex Gonzalez).

The Regional Florentine cultures of the long-neglected Central Coast, formerly known as "Early Lima," "Nieveria" or "Proto-Lima," and now called Maranga after the type site excavated in some detail and published by both Jijón y Camaaño and Kroeber, have received needed attention, thanks to the two-year excavations at the Vista Alegre and Cerro Culebra sites in the Rimac and Chillón valleys by Louis Stumer (ARCHAEOLOGY 7 [1954] 220-

228), working under the auspices of the Museum of the American Indian, and in collaboration with the University of San Marcos, Lima. Figure 4 shows some of the more outstanding pieces recovered by Stumer in cemeteries at these sites. They serve to point up the degree to which the Maranga culture was in contact with other Regional Florentine cultures of Peru, and also show the eclectic skill of the Maranga potter in incorporating the highly divergent styles of other cultures.

The well known Mochica culture, representing the most widespread Regional Florentine manifestation on the North Coast, was shown to be present in some strength in the Jequetepeque (Pacasmayo) Valley through Dischelhoff's excavations at the Huacas de Moro site and Schaedel's reconnaissance in sites farther up the valley. More vestiges of painted walls in the Huaca de la Luna, Moche Valley, were discovered. They are comparable to the Pañamarca murals (ARCHAEOLOGY 4 [1951] 145-154) but the execution is inferior.

Further light on the extent and spread of the Tiahuanaco horizon (Fusional Epoch) has been reported. Dwight Wallace, of the University of California expedition, studied Tiahuanacoid manifestations between Huari (Ayacucho) and La Paz (ARCHAEOLOGY 1 [1948] 66-73) in an attempt to determine whether Bolivia or Peru was the *fons et origo* of this great highland culture. The University of Pennsylvania expedition (1955) stud-



A



B



D



C



E



6. Typical vase of the Lambayeque-Jequetepeque area during the Tiahuanacoid period. (In a private collection in Lima, said to come from Lambayeque Valley.) Disselhoff's excavations at Huacas de Moro, Jequetepeque Valley, should serve to place this style with more chronological precision. The red-on-cream vessel combines highland Cajamarca traits with local and Coastal Tiahuanacoid features. Photograph Guillen.

4. Pottery found by Louis Stumer at Vista Alegre, Rimac Valley, Peru. A. Red on orange, fine modeled Maranga figure jar. The piece is unusual for the wealth of sculptured detail if not for its execution. B. Another specimen of Maranga ware. Glibly referred to as a napkin ring, this probably (says Stumer) is a drum. C. A Maranga vessel showing complete Mochica (North Coast) inspiration in the painted scene. D. Perhaps the most unusual find in Stumer's Central Coast excavations is this "heirloom" piece. The stirrup-spout vessel (itself a North Coast form) with Cupisnique (ca. 800 B.C.) designs was found with typical Maranga ceramics. The Maranga period dates to the first few centuries of the Christian era. E. Tiahuanaco head vase done in Maranga ware and associated with the immediately pre-Tiahuanacoid culture phase. Photographs Stumer-Guillen.



5. "Agua Hedionda," or "Stagnant Water," an appropriately named stone town of the Tiahuanacoid period in the Nepeña Valley, North Coast Peru. The portion of this planned town which is shown here gives an idea of how the hillside was terraced to provide foundations for the extensive array of houses, enclosures and public buildings. Towns of this type are characteristic of the Tiahuanacoid occupation of the Peruvian littoral, and in the north they constitute the forerunners of the huge planned cities. (Schaedel, North Coast investigations.)

ANDEAN ARCHAEOLOGY continued

ied the relationship of Tiahuanaco to other Altiplano cultures (Chiripa, Bolivia, and Pucara, near Puno). Architectural evidence of the Tiahuanacoid occupation on the North Coast was the object of much of Schaedel's last year of work under the auspices of a Yale University-Wenner Gren Foundation grant (Figure 5). Finally, Stumer's work at Vista Alegre showed in some detail the pattern of Tiahuanacoid penetration and occupation of the Central Coast ceremonial center (Figure 4, E).

Disselhoff's excavations in the little studied but large Jequetepeque Valley promise to shed light on the complicated developments in the area north of Trujillo just before, during and after the Tiahuanacoid period (Figure 6). In summary, although the Tiahuanacoid period continues to be a "Time of Troubles" and more truly a period of "confusion" than its developmental designation of "Fusional," it has now come to be considered worthy of primary attention for those interested in resolving the main developmental trends in late Peruvian prehistory.

Post-Tiahuanacoid developments have been studied in the South Coast area by Dorothy Menzel of the University of California expedition. Further data on North Coast



7. Remains of a painted interior in one of the largest "apartment house" clusters at "El Purgatorio," urban site in the Leche Valley of northern Peru. The colors are red, white and black. The wall was accidentally discovered by soil prospectors, but, as in most large centers of the North Coast, it has not been excavated. Photograph Schaedel-Guillen.



8. Mummy of the Inca child found on the summit of Cerro el Plomo, Chile. The silver "crown" is really a neck pendant, originally suspended from the child's neck by string (note the three tiny holes), but the discoverers removed it soon after they had brought the body down from the summit. Unable to replace it, they inserted it among the braids. Although the silver bracelet was the only other adornment, the child was buried with a miniature gold llama and a tiny shell llama, a well dressed silver doll, a pouch with nail parings and a feathered coca bag.



9. Shrine of stone at an altitude of 5200 meters, near the advance camp of the expedition to Cerro el Plomo. The camp sites near the shrine provided Inca ceramics which helped to date the ceremonial complex of which the Inca child was a part.



10. Base camp of the expedition to Cerro el Plomo, at an elevation of 3400 meters. A number of prehistoric camp sites were found in this desolate-looking area, within a radius of a few hundred meters of the expedition's tents.



11. After snow forced them back from the advance camp, the party woke to find its base camp transformed in this fashion.



12. Members of the archaeological expedition returning from the base camp, clothed in essential mountain-climbing gear.

MINTING GREEK AND ROMAN COINS

By CORNELIUS VERMEULE

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IN THE TWENTIETH CENTURY, when we speak of the manufacture of coins and medals in one of the world's major mints, such as those in London, Paris or Philadelphia, we think of massive, complex equipment—coin presses, reduction machines for cutting master dies, conveyor belts, and machines for testing, counting and stacking the finished product. In contrast to this the production of coins in Greek and Roman times was marked by simplicity of technique and equipment. In fact, as a prominent numismatist recently stated, "A Greek mint would normally be nothing better than a small hut of sun-dried brick, or a wooden shanty, containing in one corner a little clay-built furnace fed with charcoal" (C. T. Seltman, *Greek Coins* page 21). Although we can imagine the Athenian workshops of the fifth century B.C., and even more the Hellenistic and Roman mint establishments, as operating on a larger scale than the earliest Greek mints, coining processes in the ancient world were marked by simplicity of technique from earliest times until the Middle Ages.

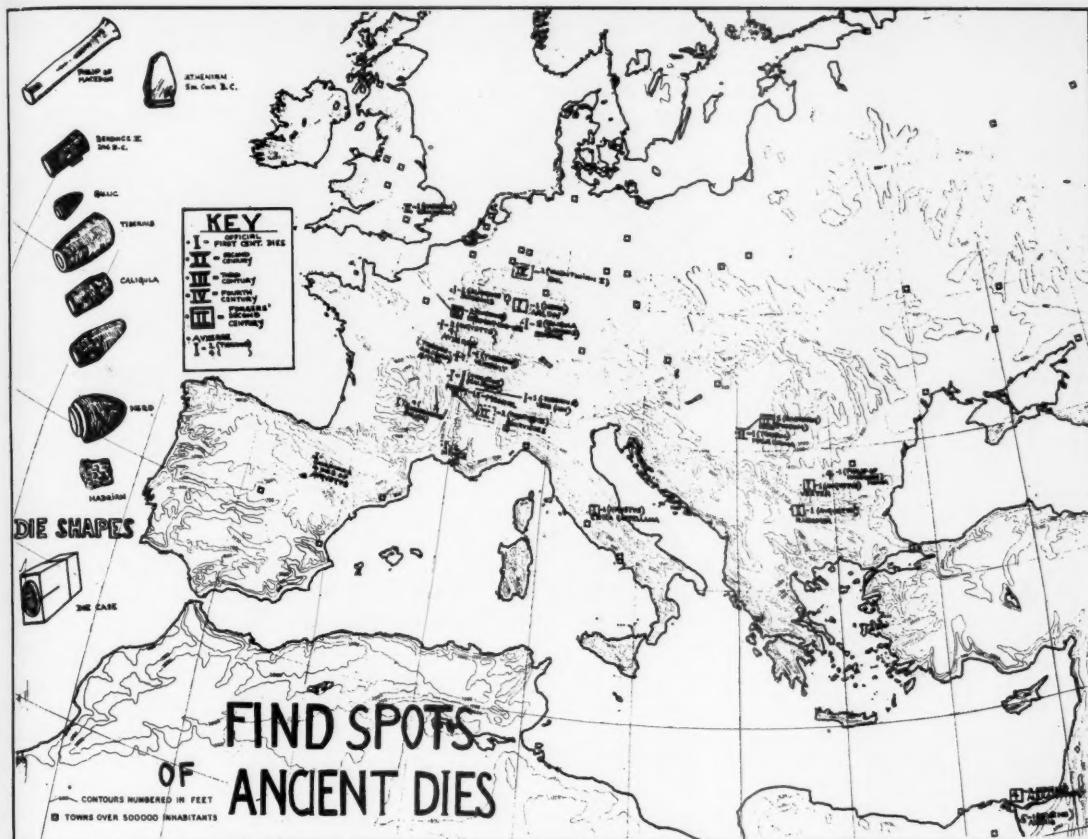
The tools required in a Greek or early Roman mint were simple ones (Figures 1, 2). The cast metal blanks



1. A die cutter's outfit. This baked clay plaque came from a tomb or sanctuary at Alexandria, Egypt. Within the raised molding we see what can be identified as four coin flans, two pyramidal and one long die shaft (the last at the lower right), a hammer, tongs (upper center), a chisel (lower left) and an awl or punch (in the center, behind one of the pyramidal dies). The man who made or ordered the relief as a commemoration of his occupation may have been an employee of the Roman mint in Alexandria. Photograph courtesy of the Ashmolean Museum, Oxford.



2. Grave relief of a minor official of the Rome mint. Beneath the bust of the deceased in a scalloped niche flanked by sacrificial implements, a scene from the mint workshop features the deceased in his toga, holding a pincer in one hand and an encased upper die in the other. On the other side of a bench with a lower die in its case and an anvil, a workman (*malleator*) holds a hammer poised to strike. This is the only undisputed coining scene in ancient relief or painting. (Late third or fourth century A.D.) Formerly in a private collection in Rome; photograph from the German Archaeological Institute, Rome.



3. Find spots of ancient coin dies. Most of the known coin dies belong to the first century of the Roman empire and come from central and southern Gaul and northern Spain. None are recorded from Greece or the Aegean islands, and Italy has produced only two dies, neither of them from Rome. At the left are shown nine different bronze die shapes; all but the die of Philip of Macedon at the top left were designed to be set in iron cases (upper dies) or anvils (lower dies).

which were struck into coins were checked by means of a balance weight. The dies themselves were cut with a graving tool, awl or small punch. Tongs or pincers were used to hold the circular metal blank, or flan, upon the block in which the lower die had been set. In early Greek times the upper die was always engraved on a long metal shaft, known as a punch (see Figure 3, the Macedonian die in upper left corner). In later Greek, Roman republican and imperial mints, the upper or punch die was, like the lower or anvil die, a small, barrel-shaped object set in an iron case (Figures 4, 5). Figure 5 shows traditional shaft-type punch dies, which continued in use as late as the third century A.D. for striking bronze coins, which required heavier equipment. The metal blank between the anvil and punch dies was hot or cold, depending on the coin's thickness. Impressions of

these dies were made by hammering on the punch (Figure 6). While the Roman genius for technical improvement made modifications in traditional coin-making processes, ancient mints never developed mass-production machinery (Figures 7, 8).

The invention of coins as we know them today is attributed to the kingdom of Lydia in the early seventh century B.C. (Figure 9,A). From Lydia, by way of the Ionian Greek cities and the Aegean islands, the use of coins spread to Greece in the early sixth century B.C. Throughout the Mediterranean world the earliest coins were characterized by a figured design on the obverse (or anvil die) and the impression of inset rectangular patterns (Figure 9,B), or an incuse design, on the reverse (as Figure 10, A and B, a nomos of Sybaris, ca. 520 B.C.). By the middle of the sixth century B.C., coins in Athens and elsewhere appeared with

4. Dies for gold or silver coins. These two pairs of dies, found near Calahorra in northern Spain, are for striking coins of a series late in the rule of Augustus (27 B.C.-A.D. 14) which have been attributed to Lugdunum (Lyons). These and similar dies show that while the dies themselves may have been cut in major centers such as Lugdunum or Rome, official coins were produced during the early Roman Empire in provincial areas where the need arose or where metal was available. Madrid, Instituto de Valencia de Don Juan. Photograph courtesy of the Director and Professor M. Grant.



figured designs on the reverse as well as on the obverse. Athens' earliest reverse design—the owl, the olive branch, and the first three letters of the city's name (Figure 9,C)—became the invariable type throughout the city's history of independent coinage.

Except in southern Italy and Sicily, which were technically in advance of the older Greek areas, the sixth and fifth century Greek coins contained the design in a rectangular rather than a circular inset area. By the end of the fifth century the circular inset was used exclusively, and within a short time the delineation of the design in an incuse area of the die was abandoned altogether. Thus Greek coin designs ceased to resemble merely designs stamped into uniform lumps of metal and became integral ornaments of their circular flans, with the transition from stamped pattern to metal surface taken up in the borders of the design. Greek and Roman coins alike were made with an eye more to beauty and commemorative value than to strictly utilitarian purposes. It is not within our scope, however, to discuss ancient coins as instruments of civic and religious propaganda, a subject which has been frequently treated. Unlike modern dimes, shillings or francs, ancient coins could not be stacked, would not fit in automatic coin machines, and were not furnished with devices such as the milled edge to prevent clipping. In short, they were produced by highly individual methods which were not related to machine coinage and which allowed for designs in higher relief and for less regularity of surface than is permitted in modern coins. Figure 10,H, a silver tetradrachm of Rhegium with a facing lion's head (ca. 410 B.C.) is an exceptionally

good example of effective high relief. Some of the dies for coins of this beautiful series are signed by an artist named Krathispos.

So far we have spoken exclusively of coins struck by sudden pressure on cast blanks. Cast coins—produced from clay molds into which the design has been impressed—were relatively infrequent in the ancient world. They were generally the products of ancient forgers who found the process of making multiple molds from a well struck coin even easier to employ than the production of base coin from cut dies. Some official coins, however, were cast. These were generally limited to relatively undeveloped areas on the fringes of the Greek world, and they were usually large coins in bronze: the fourth century B.C. bronzes of Olbia, in Sarmatia on the Black Sea (Figure 10,G), and the large coins of central Italy in the first two centuries of the Roman Republic (ca. 400-200 B.C.). Baked clay molds for casting subsidiary coins of the Emperor Diocletian and his colleagues (ca. A.D. 296-315) have been found throughout the Empire and, in several instances, in the heart of official mint areas, in such numbers as to suggest that casting was an official method of production in those critical times. Since there were many contemporary edicts against production of cast coin, it seems likely that these casts were examples of sharp practice on the part of the officials entrusted with the coinage. In Renaissance and later times casting was used to produce copies of rare ancient coins—particularly large Roman medallions and bronzes—to deceive zealous antiquarians and connoisseurs. Many modern cast or struck forgeries are very difficult to detect.

If the Greek and Roman mints displayed much more

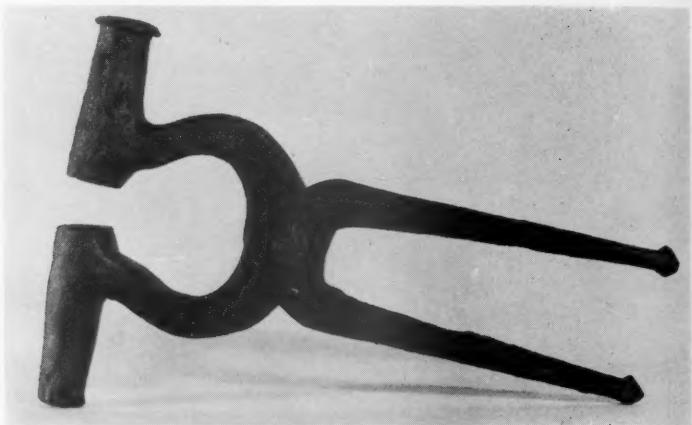


5. Iron coin dies and a case for a bronze die. Bronze and copper coins had to be struck from iron rather than bronze dies. The die cases were also made in the harder metal. Since iron rusts easily, the few iron dies preserved rarely bear more than a trace of the engraved or punched designs. Such is the case with the four dies pictured here, which were probably for coins of the early Roman imperial period. Iron die cases took the hammer blows, provided automatic alignment for the two dies, and permitted discarding of worn dies without substantial recasting of equipment. Madrid, Instituto de Valencia de Don Juan.

MINTING GREEK AND ROMAN COINS *continued*

6. Impressions from dies for gold and silver aurei or denarii of the Roman empire (Augustus through Maximinus I—ca. 26 B.C.-A.D. 235) and a Gallic silver coin of the first century B.C. The next to last die in the bottom row, for a bronze follis of Constantius Chlorus (A.D. 292-306), was probably discarded because of damage. In spite of corrosion many Julio-Claudian dies still show the excellent style of the original coin. Bibliothèque Nationale and Musée Monetaire, Paris.





7. Hinged pincers die for striking gold coins (sixth century A.D.). Such dies produced only thin coins in relatively soft metals, a process requiring no sudden heavy pressure on a relatively fragile die. These dies are the culmination of improvements in mint technique which started in Rome as early as the mid-third century A.D. Although now ruined by rust, the faces of such dies had a relatively long life. Photogaph courtesy of the Fogg Art Museum, Thomas Whittemore Collection.

individuality in manufacture of their coins, so they were somewhat less careful than modern mints in allowing defective coins to slip into circulation. It is not unusual to find double-struck ancient coins—pieces which passed between the dies twice or which moved out of position in the process of striking so as to receive two impressions of the same die, somewhat like a double exposure on film. A tetradrachm of Syracuse (Figure 10,F), ca. 410 B.C., demonstrates that double striking could occur even in the most artistic of Greek coinages. Restriking was also common, particularly in Greek and early Roman republican times. The mint of one city or state would gain possession of a supply of coins of a neighboring city and would reheat the coin flans enough to enable them to strike their own designs over the original types. Frequently these restrikes show both the new design above and traces of the older die beneath. For example, a silver tetradrachm of Aenus in southern Thrace (Figure 10,C), struck before the mid-fifth century B.C., shows a head of Hermes facing to the right. Comparison with Figure 10,D reveals that this piece is overstruck on a tetradrachm of neighboring Abdera, which has a seated griffin and a cock, the symbol of a magistrate, at lower left. Traces of the head and upraised paw of the griffin, and the entire figure of the cock, can be quite clearly seen beneath the head of Hermes. Another way of reusing coins was applying a counter-

mark—impressing a small design with a punch or a “brand” on an existing coin to give it new currency in another area, to revalue it for further circulation, or to indicate that the coin had been tested for normal metallic content. Figure 10,E is a tetradrachm of Ptolemy I of Egypt (311-285 B.C.); the counterstamp at the lower left is the monogram of Byzantium, placed on the Egyptian coin in the third century B.C. when the city was menaced by the Gauls and was compelled to use her own bullion for yearly tribute to the barbarian invaders.

While we have little direct knowledge of the monetary officials in Greek mints, much can be deduced from inscriptions and from the coins themselves. Of the artists who engraved the dies for the superlative silver coins of southern Italy and Sicily in the late fifth century B.C. we know only several names—Kimon, Euainetos, and the like—or sometimes only initials. The so-called New Style silver tetradrachms and some bronze coins of Athens, a series starting in the decade after 200 B.C., include first the monograms and later the names of magistrates who must have been responsible for the coinage under the authority of the Council. The series of Roman republican coins is marked by moneyers' names from the end of the second century B.C. onward, as in the denarius of T. Caerius, 45 B.C. (Figure 10,I).

The system of having three moneyers or mint mag-



8. Coining according to late Roman and mediaeval techniques. Mr. R. H. M. Dolley, an authority on Anglo-Saxon numismatics, uses a nineteenth century forger's punch and hinged dies, the latter for producing pennies of Henry I of England (1100-1135), to demonstrate the relative ease of production of gold and silver coins in late antiquity and the Middle Ages. The punch die is like those used in striking Greek and earlier Roman coins; the hinged dies are identical with those of later Roman and Byzantine mints. While manufacture of larger gold and silver medallions and bronze coins still required heavy dies, hammers and pincers, all operated by several men, coins of penny size could be struck with a minimum of equipment and manpower.

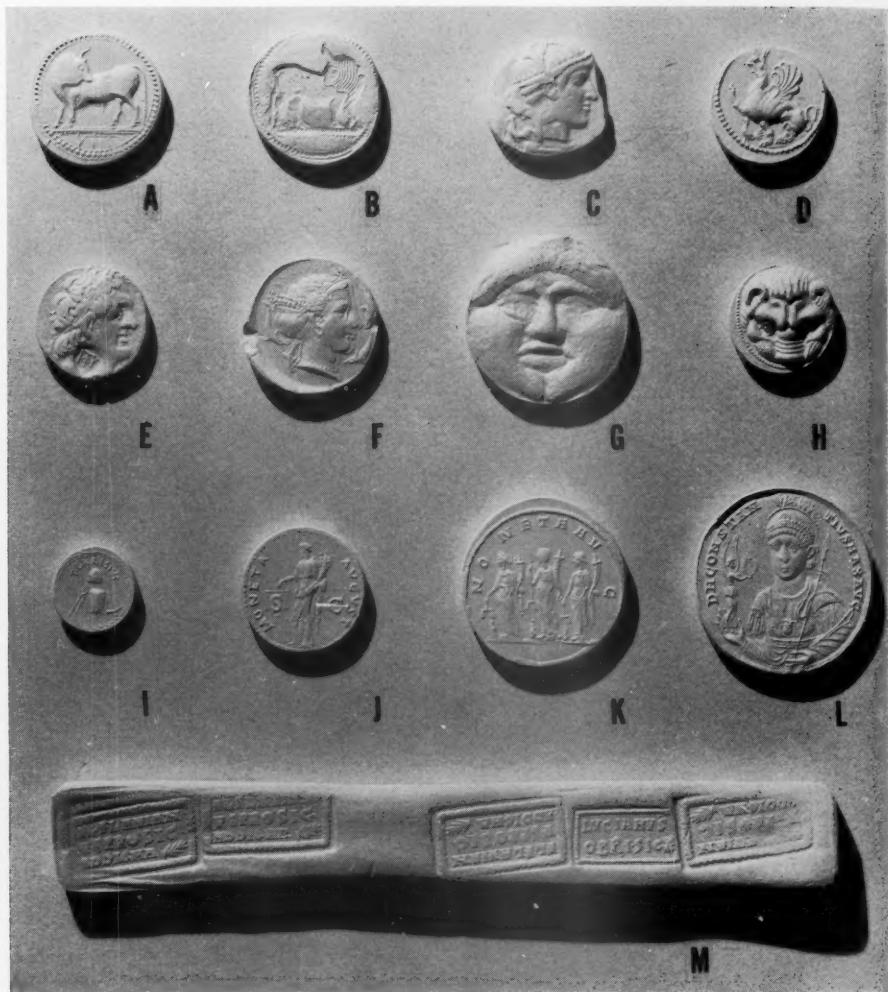


9. Early Greek coins. A. Electrum one-third stater (greatly enlarged), probably of Alyattes of Lydia (ca. 610-561 B.C.), showing a lion's head with globule radiate on the forehead and an incuse reverse. B. Terone or Heracleia in Macedonia, silver tetradrachm ca. 500 B.C. An amphora appears on the obverse, and a quadripartite incuse square forms the reverse design. C. Athens, silver tetradrachm, 506-490 B.C. An archaic Athena head appears on the obverse; Athena's owl and olive branch is shown on the reverse. Coins from E. W. King Collection, Bryn Mawr College.

istrates (four under Julius Caesar) continued until about 5 B.C., when moneyers' names disappear from the bronze coinage midway in the rule of the first emperor, Augustus. Although the names of moneyers vanish from the coins, inscriptions testify to their activity into the middle of the third century A.D. Under the Empire the traditional group of moneyers was, however, responsible only for the bronze coinage, gold and silver being in the hands of officials of the imperial household. The organization was regularized and placed on a pan-imperial basis by Diocletian (A.D. 284-305). From the time of his rule to the end of the Empire in the West, and later of that in the East, Roman coinage was produced at major mints in the principal cities of the Empire—Rome, Antioch, Alexandria, Constantinople, Carthage, to cite at random. The mints were under the control of imperial officials, who were in charge of producing coins in a uniform Roman monetary system, with mint marks and mint workshops clearly indicated. Figure 10,L, a five-solidus gold medallion of Constantius II (A.D. 337-361) struck at Nicomedia, bears witness to the technical excellence of fourth century Roman coins. Figure 10,M, a gold bar of about A.D. 375 probably from the mint of Sirmium near the frontier of southern Germany, is illustrative of the mint control of the period. In A.D. 365-366 the Emperor Valentinian issued an edict to the effect that bullion sent to the central mints should

be in the form of marked bars of specified weight rather than in coins, which could be short in weight or perhaps even false. Two hoards of these bars have survived to the present day—one from Abukir in Egypt and one discovered in 1887 at Haromszeker in Transylvania. The example illustrated comes from the latter find.

We cannot conclude without a word about the titles and occupations of the Romans, freedmen and slaves



10. Greek and Roman coins illustrating coining techniques and mint activities.

A, B. Obverse and incuse reverse of a nomos of Sybaris, ca. 520 B.C.

C. Silver tetradrachm of Aenus in southern Thrace, 460 B.C., overstruck on a coin of Abdera.

D. The comparable coin of Abdera, with a griffin and the magistrate's mark, a cock.

E. Tetradrachm of Ptolemy I of Egypt, third century B.C., countermarked with the monogram of the city of Byzantium.

F. Tetradrachm of Syracuse, ca. 410 B.C., possibly by Kimon and showing evidence of double striking.

G. Bronze coin of Olbia in Sarmatia with gorgon's head, a rare cast Greek coin.

H. Tetradrachm of Rhegium, ca. 410 B.C., showing the high relief permissible in an ancient coin.

I. Denarius of the Roman republican moneyer T. Carisius (45 B.C.) with coining instruments—hammer, pincers, upper die and anvil.

J. Moneta on a copper coin of Domitian (A.D. 81-96).

K. The three Monetae—gold, silver and bronze—on a medallion of Probus (276-282).

L. A gold multiple, five-solidus piece, of Constantius II (337-361), showing Roman fourth century craftsmanship.

M. A gold bar with mint officials' stamps, late fourth century A.D.

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MINTING GREEK AND ROMAN COINS continued

who produced the imperial coinage in the mint at Rome during the second century A.D. We have alluded to the higher officials. Below these, *conductores flaturaæ* directed *faturarii* who cast metal bars and blanks for coining. The *suppositor* placed the blank between the coin dies, the *malleator* brought the hammer down upon the upper die, and the *signator* seems to have been the person who held the die in position, though he may have been the man who added the letters to dies produced from a master punch. Those who engraved the dies were known generally as *sculptores*. Publius Licinius Demetrius, the gentleman on the right in the Moneyer Relief (Figure 11), may therefore be identified as a *sculptor*. A group of inscriptions dedicated to the divinities of the Rome mint and dated A.D. 115 gives the names of a number of other mint workmen. Names such as Felix and Demetrius testify to the role of freedmen of Greek descent in the production of imperial Roman coins a century after the activity of Licinius Demetrius and his fellow freedman Philonicus. Figure 10,J (A.D. 81-96) shows the patroness of the mint—Moneta with her balances and horn of plenty—and 10,K displays a triad of Monetae, perhaps symboliz-

ing the three major metals, on a bronze medallion of Probus (A.D. 276-282). Appropriate piles of coin appear beside the feet of the goddesses.

FURTHER READING ON ANCIENT COINING TECHNIQUES

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- G. F. HILL, *A Handbook of Greek and Roman Coins*, London 1899.
- C. C. VERMEULE, *Some Notes on Ancient Dies and Coining Methods*, London 1954.
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11. Die cutter relief. The two men shown, perhaps father and son, are described as "freedmen of Publius Licinius," whose name they have taken. Philonicus, on the left, appears in the idealizing style of earlier Julio-Claudian portrait heads, while the older Demetrius is shown in the sculptured tradition which we associate with Romans of the late Republic. The inscription, with the words *patrono fecit* at the lower right, states that Demetrius made the relief for his patron, Publius Licinius. The symbols in the pediment are a cased coin die (or two cased dies) resting on a block, a hammer, and tongs holding a coin-blank.

Beside Philonicus are the emblems of a lictor's office; beside Demetrius appears a metalworker's or sculptor's kit—bow-drill, knife, hammer-head (or small anvil) and punch. These suggest that while the younger Greek freedman rose to the office of lictor, the older man worked as a die-sinker for P. Licinius Stolo, a *triumvir monetalis* ca. 17-12 B.C. This monument is the chief surviving evidence for the names and appearances of the men associated with the artistic side of a great age of Roman coinage—the early empire. Photograph reproduced by permission of the Trustees of the British Museum.

Shamshir Ghar-

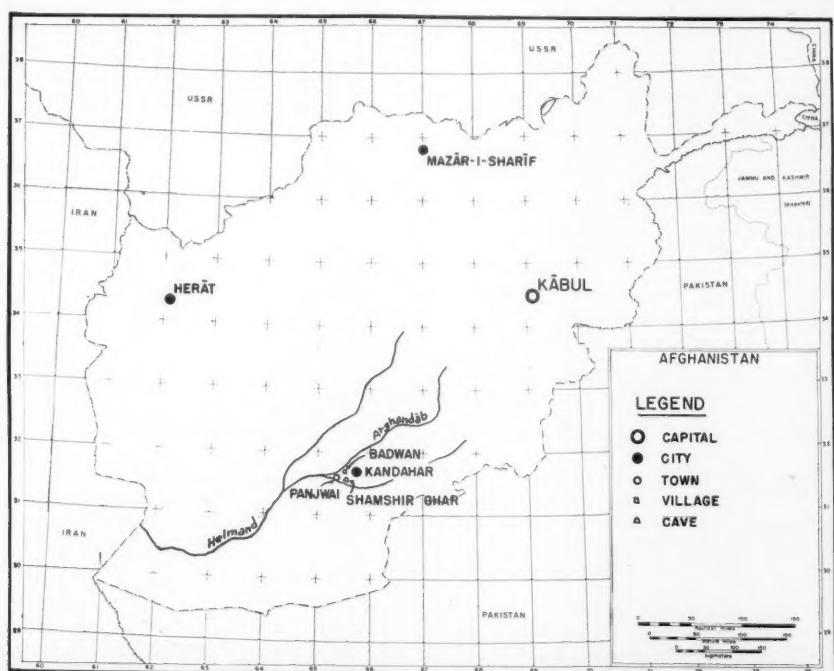
By LOUIS DUPREE

• Louis Dupree was a member of both the First (1949) and Second (1950-51) Afghan Expeditions of the American Museum of Natural History, New York. He has also taken part in excavations in various other parts of the world—Massachusetts, France, Pakistan and Iran. In 1955 he received the Ph.D. degree from Harvard University, and he is now Associate Professor of Middle Eastern Studies at the Air University, and Research and Editorial Specialist, Research Studies Institute, Arctic-Desert-Tropic Information Center, Maxwell AFB, Alabama.



1. Shamshir Ghar cave after excavation. Mrs. Dupree stands on the dump near the entrance.

2. Map of Afghanistan, showing Shamshir Ghar cave and the region explored.



a Cave in Afghanistan

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WHEN AN ARCHAEOLOGIST digs a cave he is usually looking for prehistoric remains. This was true at Shamshir Ghar in the Kandahar Province of Afghanistan. The cave, however, completely disregarded the desires of this archaeologist and instead yielded an excellent historic sequence ranging from about the third to the eleventh century A.D.

We explored in Afghanistan for two reasons. First, knowledge of Afghanistan's past is full of abysmal gaps. The outlines are known but whole chapters are missing. The second reason was the romantic appeal of a little known land where one might come face to face with situations which others only dream about. This is the stuff from which travel books are born. But the archaeologist, though he may feel the romance as keenly as the adventure writer, must be able to separate fact from fancy. No newspaper headlines can take the place of the scientific monograph in ultimate value.

The excavation of Shamshir Ghar was more accidental than planned. We had hoped to dig in the foothills of the northern Hindu Kush Mountains because of the Stone Age finds across the Amu Darya (Oxus) River in Russian Tajikistan, and the promising beginnings of Dr. Carleton Coon's work in northern Iran. While waiting in Kabul (in the autumn of 1950) for official permission to excavate, I became acquainted with Dr. Sultan Khan, a German-trained geologist in the Ministry of Mines, and with Myles Walsh, an American serving as geological adviser to the Afghan government. These men, who had spent years in the mountains of Afghanistan, told of caves they had examined in the course of geological and mining research.

Our party received permission from Ahmad Ali Kohzad, Director of the Kabul Museum, to undertake reconnaissance in the Panjshir River valley of Afghan Tajikistan. We spent fifteen days there and examined several caves. On our return to Kabul, however, we learned that we would not be allowed to excavate in northern Af-

ghanistan. Understandable political expediency had dictated the government's decision.

We then requested permission to examine the caves in Kandahar Province mentioned by Dr. Sultan. Permission was granted and we reached Kandahar early in October. Our first objective was to find the cave called Shamshir Ghar, reported to be northeast of Panjwai and west of Kandahar. In spite of help from both government officials and local inhabitants it took two days to locate the cave (Figure 1). The name Shamshir Ghar—Cave of the Sword—refers to a local legend about a hidden treasure protected by four invisible swords rotating constantly on a horizontal plane. Stories about the cave are many and various. The headman of Badwan, the nearest village, told this version:

A long time ago Baba Wali [a sainted character in Badwani folklore] was traveling from Kalat-i-Ghilzai to Badwan by way of Shamshir Ghar [distance about 125 miles]. Along with Baba Wali was one of his disciples, a young man from Mazar-i-Sharif. Now it happened that a large pile of gold and jewels was lying near the entrance of the cave [I was shown the exact spot]. These baubles were guarded by four rotary swords. If a man passed through the cave and left empty-handed he was unmolested, but if he stopped to collect a few specimens he was immediately beheaded.

Baba Wali, being a very holy man and having made the trip many times, was not tempted, so he passed safely by the swords. His disciple, the novice holy man, loaded his turban cloth with wealth and had his head lopped off. However [the story concludes], the disciple picked up his head and went after his master for, after all, he was the follower of a very holy man.

Shamshir Ghar is located about fifteen miles west-northwest of Kandahar city (Figure 2). The cave is 1028 meters (3368 feet) above sea level, in a Cretaceous limestone massif having a northeast-southwest trend. Badwan, the nearest village, is a small farming community on the

Shamshir Ghar continued

3. The mud hut which was the Badwan home of the author and his wife. The bearded gentleman chasing away the little girl and the chickens is the headman of Badwan. The girl and the chickens moved just as the picture was taken.



west bank of the Arghandab. To reach the cave one walks twenty or thirty minutes uphill southeast of the village.

On our first inspection of the cave we found two recent corpses. One was lying just outside the mouth of the cave, the viscera completely gone and the bones scattered about, probably by wild animals which had made a meal or two on the dead man. Only the parchment-like skin of the back, a few vertebrae, ribs and skull were left. The second body was found in the darkness of the fourth chamber of the cave, in the bottom of a pit. This desiccated corpse was still fully clothed, complete with turban, its throat slit from ear to ear. Government officials surmised that the two men had been killed in a recent tribal feud.

We decided to dig a test section at Shamshir Ghar, but before excavation could begin other problems appeared. Only a footpath covered the five miles between Panjwai and Badwan, and we had to move much equipment to the village. Using the winch on our Dodge Power Wagon to clear away boulders, and keeping the truck in four-wheel drive, we managed to drive through the sand and rocks to within a quarter-mile of Badwan. Twice, when the truck pitched at a thirty-degree angle over an irrigation ditch, villagers and two soldiers assigned to guard our equipment dug us out. We decided to tempt fate no more, so we parked the truck and carried the most necessary equipment on foot to Badwan. This took a day and a half, and once in Badwan we stayed put, except for a few necessary trips to Kandahar.

Next we had to find a place in which to live and store our specimens. After lengthy consultation with the village elders, Mohammad Ibrahim, the archaeologist and government representative, rented two rooms of a grain warehouse for us (Figure 3).

In digging a site an archaeologist must hire local labor. In hiring labor he becomes a manager and, as in all societies, management-labor problems arise. Our problems rose and fell on the first day of work. After agreeing on a daily wage, our workmen did not appear. The pome-

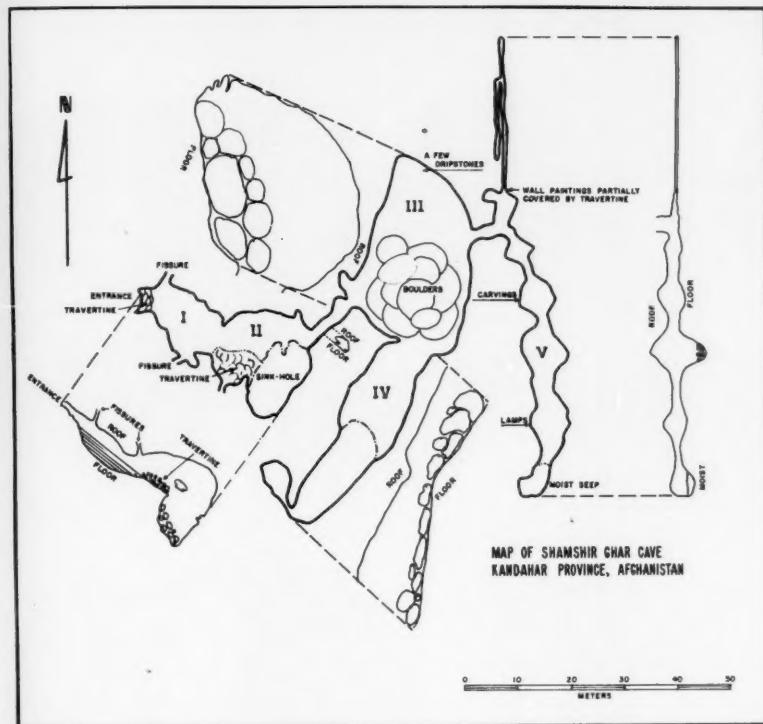
granate-picking season had started and they could make more money in the orchards. After we agreed to pay wages equal to those for pomegranate-picking, our workmen showed up the next day.

But then I was ordered to appear before the governor of Kandahar, and made the grueling trip to find that he had received orders not to permit us to excavate, although we could continue reconnaissance. We were to wait at Kandahar for Kabul's approval before we did any digging. After I explained that reconnaissance included "testing" and that I was only "testing," not "excavating," the governor was sympathetic and permitted me to continue work at Shamshir Ghar.

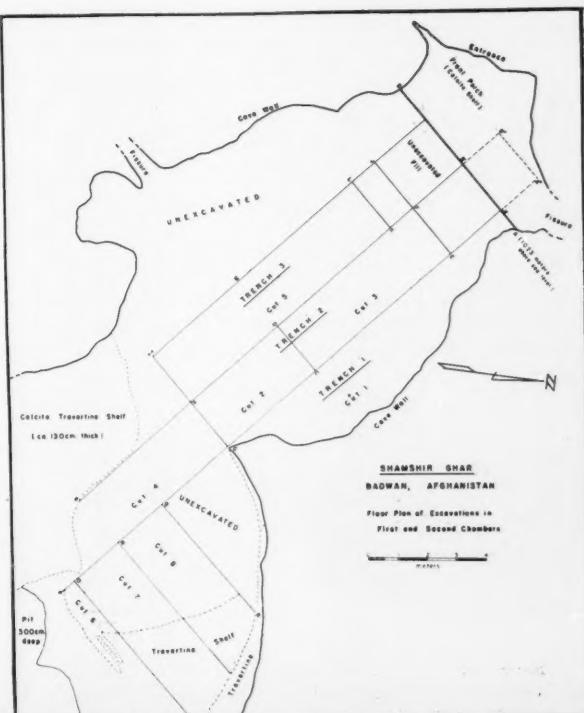
The cave patiently submitted to our picks, shovels and brushes, and since archaeology is a job of destruction before reconstruction is possible, we proceeded very cautiously. The cave has five distinct chambers (Figure 4) but only the first two give evidence of prolonged human occupation (Figure 5).

Chamber I is about 16 meters long, 11 meters wide and everywhere but at the entrance is about 2.50 m. high. Chamber II is separated from it by a low, pinched-in tunnel. When digging in this chamber we used kerosene lamps made of beer cans and raw cotton wicks. Lanterns were used in exploring the third, fourth and fifth chambers. Chamber III, reached through a long narrow tunnel, is the largest of the five—about 35 x 25 meters and 30 meters high. A jumbled mass of limestone boulders separates Chambers III and IV. Chamber IV is very much like III, but it slopes in the opposite direction and ends in a pit or sinkhole. The fully clothed corpse was found in this pit. Dimensions of Chamber IV are 40 x 10 meters, and it is 12 meters high.

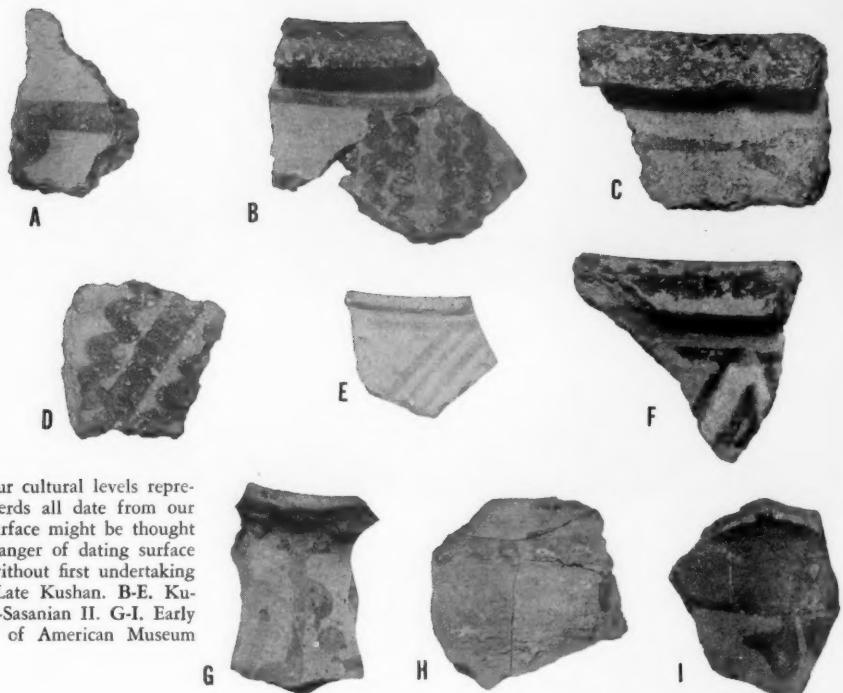
Access to Chamber V is difficult since it is about four meters higher than Chamber III and is approached through a short tunnel. It consists of a series of sinkholes ending in a small, moist chamber where thousands of bats hang from the ceiling. North of and perpendicular



4. Plan and cross-section of Shamshir Ghar cave. Roman numerals indicate the five chambers. Only the first two were excavated. (Drawn in the field by Dr. John Zeigler, redrafted by Z. F. Shelton.)



5. Chambers I and II of Shamshir Ghar, with excavated and unexcavated areas indicated. Each trench is two meters wide. The trenches were excavated in numerical order. The rest of the area was left for future examination. Levels are measured from base line AB, 1023 meters above sea level. (Drawn by J. Zeigler and the author.)



6. Painted sherds from the four cultural levels represented in the cave. These sherds all date from our era, yet if collected on the surface might be thought prehistoric. This shows the danger of dating surface finds by comparative means without first undertaking stratigraphic excavation. A. Late Kushan. B-E. Kushano-Sasanian I. F. Kushano-Sasanian II. G-I. Early Islamic. Photograph courtesy of American Museum of Natural History.

Shamshir Ghar continued



8. A bronze knife found in the second chamber of the cave, in mixed fill. Probably dating from Kushano-Sasanian I, it is similar to knives found by Sir Aurel Stein in Chinese Sinkiang.

to the short entrance tunnel is a narrow passage, probably formed along a fissure (see Figure 4).

Four cultural levels were recognizable at Shamshir Ghar:

LATE KUSHAN PERIOD (third-fourth centuries A.D.)

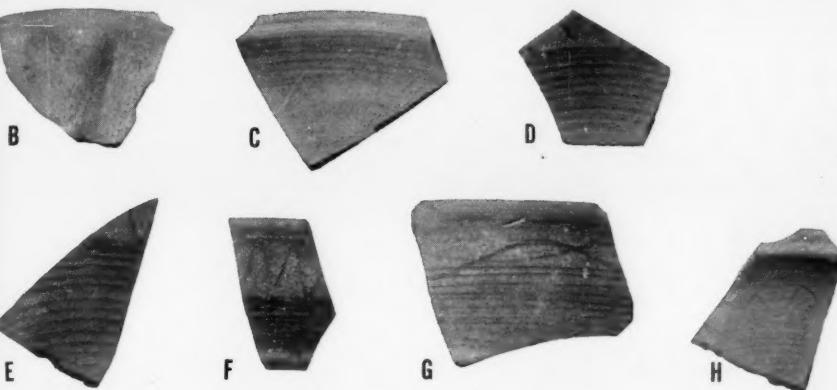
KUSHANO-SASANIAN I PERIOD (ca. A.D. 400-700)

KUSHANO-SASANIAN II PERIOD (ca. A.D. 700-867)

EARLY ISLAMIC PERIOD (A.D. 867-1222)

The hearths and pits of later occupants had intruded into the Late Kushan levels. Most characteristic of this earliest period were a crude grit ware tempered with broken sherds and crushed limestone, and a red ware with geometric red or black painted designs (Figure 6).

The major occupation levels are those of Kushano-Sasanian I. Most of the pottery is a continuation of Late Kushan wares, but the occurrence of a single blue-green glazed sherd of Sasanian type is significant. A thin red streak-pattern burnished ware appears (Figure 7). Many sherds of bisque and greenish paste were found, but few with surface decorations. Bronze and iron bridle decorations in Kushano-Sasanian I (and Late Kushan) levels indicate that the cave was occupied by horsemen. The most



7. Thin red streak-pattern burnished ware. This kind of pottery appears in the Kushano-Sasanian I period and continues through the Early Islamic. The earlier sherds have designs in black, as though the burnishing tool had been dipped in pigment. The designs are composed of parallel lines, straight or undulating. A, B (which is indented like Sasanian metal wine bowls). Kushano-Sasanian I. C-F. Kushano-Sasanian II. G, H. Early Islamic. Photo courtesy American Museum of Natural History.

common projectile point is a concave-sided iron point (triangular in section) of the classic "Scythian" type. A bronze knife (Figure 8), probably of this period, resembles some from Chinese Sinkiang. A series of stone seals (Figure 9) was found, along with a beautifully polished celt.

In the Kushano-Sasanian II period the mica-tempered wares and red streak-pattern burnished wares increase, and a distinctive metallic black ware appears (Figure 10). One base of a vessel bears the impression of a fine Sasanian seal (Figure 11). A semicircular red agate seal of Sasanian origin, with a scorpion in intaglio, was also found. Horse-trappings and iron projectile points continue to be the most numerous metal objects.

The Early Islamic period brings an abundance of stamped bisque ware (Figure 12) and expertly glazed wares (Figure 13). The red streak-pattern burnished wares become rare. Two new types of iron projectile points occur, one with a forked point, the other triangular in section. A great variety of beads and glass was also uncovered, in larger quantities than in the lower levels.

We must now consider who left behind these remains

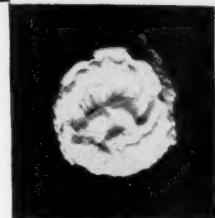
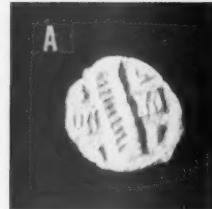
and why they lived in this cave. Let us first attempt to decide what sort of people would be living in a remote cave, difficult to reach. There are a number of possibilities:

(1) The occupants were permanent residents by choice. This does not seem plausible because many towns and villages lay within a few days' march of Shamshir Ghar. G. Le Strange (*The Lands of the Eastern Caliphate*, 1930) mentions several large towns reported by Arab geographers and travelers before the thirteenth century. Since there were many urban communities nearby, it is unlikely that any people of such sophisticated culture would deliberately choose to live in a cave.

(2) Since the cave lies on one of the main caravan routes, the possibility that it was a temporary shelter cannot be discounted. Sporadic occupation by travelers, however, would have contributed little debris. With the walled caravanserais of Panjwai less than an hour away, there would be no need for a traveler to hide in the hills for protection against bandits. And the cave could not possibly have housed a long, well loaded caravan.

(3) Today many caves in the Middle East are used as sheepfolds. Shamshir Ghar is not, because few sheep are

9. Casts of seals made of soft stone with motifs indicating Sasanian origin. Almost all the circular seals have a beaded border, a Sasanian characteristic. A. Talc seal with cross on one side, lizard and two snakes on the other. B. Talc seal, elliptical in section. Winged camel on one side, flying bird on the other. C. Steatite seal with attenuated figure of a man kneeling before a winged creature, perhaps a griffin or a phoenix. D. Crude limestone seal in shape of truncated cone. A, B and C are Kushano-Sasanian I; D is Early Islamic. Photograph courtesy of Mr. Fred Orchard.



10. Metallic black ware, which appears only in Kushano-Sasanian II levels. The white dots are crushed limestone temper. The vessels have a thin red layer inside and a thin black layer on the outer surface. Some of this ware is highly burnished.

Shamshir Ghar continued

kept in the village of Badwan and the cave is not easily accessible. The cave floor was covered with dust and limestone fragments but not with sheep dung.

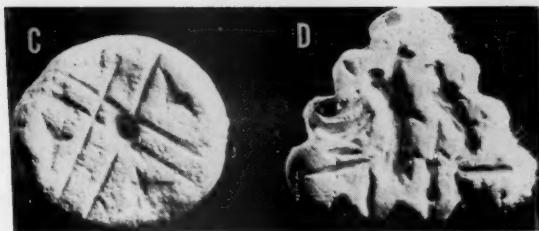
(4) Every country has a "Smugglers' Cave" or "Robbers' Cave" and usually a legend or two about bandits who ranged from the cave, harassing legal authorities and plundering caravans. Bandits or smugglers may have lived in Shamshir Ghar at one time or another, but they would probably have used it only as a temporary hideout. It is not likely that they would leave behind many objects.

(5) The most plausible possibility is that the cave was used by refugees from the many wars which continually overthrew and crowned kings and satraps. This hypothesis, which is supported by abundant evidence, fits the facts better than do the other four.

Two routes, both equally difficult, lead to the cave from the village of Badwan and the Arghandab River. These routes can easily be covered from good lookout points. The isolation of the cave is emphasized because the ancient trade route, still in use, lies across the river. It is difficult to lead a horse over the large boulders along the trails leading to the cave. The sub-provincial governor of Panjwai, a regular visitor to our excavations, found it impossible to ride a horse to the cave. The horse-trappings found in the cave do not mean that it was used as a stable, because only desperate men would bring horses into such a steep ravine. Refugees would probably have kept their



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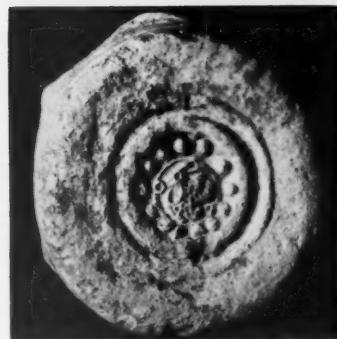
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horses in another isolated but more level valley just west of the cave, to which a narrow trail leads.

Shamshir Ghar was used as a refuge as late as 1929, when a few Badwani families moved there in fear that Bacha-i-Saqao, a Tajik bandit who had seized the Afghan throne, would take reprisals against the Pathans who had supported Amanullah, the deposed king. These families remained only a few days, cooking their meals in the open, sleeping in the cave at night. A coin of Amanullah's reign and a well preserved box of Swedish matches found in a small crevice near the mouth of the cave may have been placed there by the short-time residents of 1929.

The archaeological evidence also lends support to the refugee thesis. For example, makeshift stone choppers and other crude stone tools found at the cave were used probably because of expediency, not from choice. No intact pots and few whole metal objects have been found. If the occupants were refugees they would have taken any useful objects with them when they left. The absence of fine luster ware, so common at other Early Islamic sites, may thus be explained.

The refugee theory fits nicely into the cultural and historical sequence at Shamshir Ghar. The Late Kushan remains might have been left by officials of the independent Kushan state after the Kandahar region had been reconquered by the Sasanians in the fourth century A.D. This phenomenon is familiar in Middle Eastern history. A



11. Base of a bisque ware vessel (Kushano-Sasanian II) with seal impression of a hare looking over its shoulder. Note the beaded border. Photograph courtesy of Mr. Fred Orchard.

12. Stamped buff-and-white ware. Only one sherd with stamped design (at extreme right, second row) was found in a Kushano-Sasanian II level. This fragment bears "tear drop" bosses similar to those on Sasanian silver vessels. The other stamped sherds are of the Early Islamic period. The most common motifs are volutes, leaves and flowers, hares, tear drops, repeated heart shapes and geometric patterns.

A wooden stamp probably impressed the designs on leather-hard bisque or whitish clay. Finger prints found on the inner surfaces of the sherds indicate that the potter backed the wall with his fingers when stamping the pot. Photograph courtesy of American Museum of Natural History.



13. Common sgraffito glazed wares. The red fabric was covered with a white or cream slip, and designs incised through this slip before glazing. The lines and the spaces between are often emphasized with dark green paint. Occasionally violet, brown or red paint is used. Over all the painted designs is a transparent, open crackle glaze.

This pottery falls between the seventh and twelfth centuries. Like much contemporary Middle Eastern pottery, it seems to derive from Samarra, a ninth-century site in Iraq. Many sherds are local variants of ninth-century Nishapur (eastern Iran), Samarkand (Russian Turkestan) and Brahminabad (West Pakistan) wares. They are not so finely made, however, and (according to communication from J. C. Gardin) are closer to pottery from post-ninth-century Bust in Afghanistan. Photograph courtesy of American Museum of Natural History.

Shamshir Ghar continued

king conquers an independent state, appoints the defeated ruler as satrap, or governor, and allows him a relatively free hand. Gradually the satrap usurps more and more power, until he or one of his successors declares his independence. Then the reconquering process begins. The refugees were probably all government officials, their families and retainers. The peasantry, accustomed to oppression, always stayed on the land.

The deep Kushano-Sasanian I levels probably indicate several occupations, for this was the period of wars between the Hephthalite Huns (White Huns) and the Sasanians. The occupants of this period were probably always the Kushan satraps, who continued to serve no

matter who controlled southwest Afghanistan. This was also a period of internal anarchy, for each new ruler had to fight to maintain his position. Kushano-Sasanian II was the period of early Arab raids, when the cave must have been in constant use.

The Early Islamic period saw the spread of Islam into Afghanistan and Central Asia. It was a time of continual upheaval, as dynasty gave way to dynasty in rapid succession. Shamshir Ghar had no lack of potential tenants.

There is very little suggestion of occupation in the cave after the twelfth century. Perhaps the total war waged by Mahmud of Ghazni and later by Genghis Khan and Tamerlane left few refugees.



1. Gravel pit at Šempeter, near ancient Celeia, showing the marble blocks as they were found lying in confusion in the old river bed beneath the modern surface. The man at the left is standing in front of a Roman concrete foundation.

ROMAN FAMILY TOMBS IN YUGOSLAVIA

By Josip Korošec

A GRAVEL PIT is perhaps the last place anyone would look for ancient tombs, but the vagaries of a river which changed its course several times resulted in the accidental discovery of a great many elaborate grave monuments of the Roman imperial period in just such a pit (Figure 1). This interesting find was made in northwestern Yugoslavia, at a town called Šempeter (St. Peter) which lies in the valley of the Sava (or Savinja) River, on the main road between Ljubljana and Celje (ancient Celeia) and not far from the latter. Other ancient remains had previously come to light nearby—the ruins of a temple dedicated to Juno, parts of walls, and Roman pottery. But the quantities of structural blocks found by digging for gravel was quite striking. These blocks began to appear in 1952, and systematic excavation followed. By that time more than five hundred separate blocks had been found. Most of these are marble, but there are also sandstone blocks and concrete foundations. There were not only blocks from structures, both decorated and plain, but several headless seated statues. The many varied architectural pieces at once raised the question as to the original use of the blocks. Some were richly orna-

mented with figures in relief, others with purely decorative motives. It was soon clear that they belonged to various grave monuments—aediculae (edifices like small temples or shrines), tombs with baldachins, or canopies, cinerary cists and tombstones. From the large amount of material preserved it proved possible to reconstruct completely (at least on paper) a number of the important tombs—an almost unique opportunity.

It is evident that a Roman cemetery was situated beside the Sava River, which in the early centuries of our era flowed through the area where Šempeter now stands. Some time about the middle of the third century A.D. a catastrophic flood caused the river to undermine the bank on which the necropolis was located. The tombs sank into the river bed and were gradually covered with sand and gravel. Some time later the

• The Archaeological Section of the Slovene Academy of Sciences and Arts has for several seasons been excavating the remains of a Roman cemetery discovered by chance at Šempeter, Yugoslavia. Professor Josip Klemenc, who directed the work, has published the finds in the *Acta Archaeologica (Arheološki Vesnik)*, Slovene Academy of Sciences and Arts, VI, 2, 1955.

3. Drawing showing the tomb of the Priscianus family as restored. The foundations of this elaborate aedicula were preserved, and from these we learned its dimensions, which were 4.50 m. by 3.75 m.



ROMAN FAMILY TOMBS continued



2. The tombstone of C. Vindonius Successus, aedile of Claudio-Celeia, dating from the middle of the first century A.D.

Sava shifted southward to its present bed, but the ruins of the Roman cemetery remained buried until their discovery in 1952.

The tombs belonged to eminent families of Celeia, a city in the Roman province of Noricum. The oldest monument, dating from the Claudio-Neronian period (A.D. 41-68), was erected by C. Vindonius Successus, aedile of Claudia Celeia, for himself and his wife Julia (Figure 2). This is a comparatively simple tombstone consisting of three blocks, the central one bearing the inscription on the front, the figure of Vindonius in relief on one side and his wife on the other. This block rests on a molded base and is topped with another bearing crowning moldings.

The finest tomb (Figure 3) belonged to the family of Priscianus, who lived about the time of Antoninus Pius (A.D. 138-161). Members of this family buried here were C. Spectatius Priscianus, duumvir of Celia, his wife Justa, their son C. Spectatius Secundus, who held the same honorary post as his father, Secundus' wife, Tutorina, and others. The over-life-size statues of father, mother and son have survived, but the heads have not been recovered. A later inscription chiseled into the upper part of the block containing the inscription of C. Spectatius Secundus mentions Spectatius Avitus and Aurelia Severina. The latter name points to a date about A.D. 240 for the added inscription.

A reconstruction of the Priscianus tomb was made possible by constructing small plaster models of the structural pieces, nearly all of which were found rela-

4. The sacrifice of Iphigenia at Aulis: a relief on the side of the Priscianus tomb. At the right a man holds the hind which Artemis substituted for the maiden. The elaborate border above the figures is characteristic of many of the pieces.



tively undamaged. The façade of the small temple-like structure is ornamented with pilasters whose capitals support an entablature with a relief showing a lion pursuing a horse. On the façade at right and left is a relief showing a satyr disrobing a nymph. On the tympanum a nymph rides a marine monster and on the front of the gable is a Medusa head. Each side wall bears a relief flanked by plain marble slabs: that on the right side represents the sacrifice of Iphigenia at Aulis (Figure 4) while that on the left, the upper part of which is missing, probably shows a Greek stabbing a fallen warrior dressed in Oriental armor. The back wall consists of plain marble slabs. The attic (above the entablature) also bears reliefs, including a representation of the rape of Helen on the right wall and an armed hero at each corner.

Remains of two other aediculae have been found, but not enough to give a complete idea of their size and decoration. One of these had six relief figures ornamenting the attic, the four seasons (of which only Spring is lacking) and the Dioscuri, Castor and Pollux (Figure 5). A Medusa head adorned the gable of this aedicula (Figure 6). The remains of still another aedicula were discovered during 1954. A marble griffin 1.20 m. high, which was attached to part of a massive gable (Figure 7), shows that this must have been the largest of the three aediculae.

Of the tombs surmounted by baldachins two can be reconstructed fairly completely. One baldachin, an enormous piece of marble weighing over four tons, is almost completely preserved and has a ceiling with

5. Personification of Winter—one of the four seasons represented in relief on the attic of one of the aediculae. The man, who is rather lightly clad for winter weather, is evidently returning from a successful hunting and fishing expedition.



6. A massive and powerful Medusa head, from the gable of an aedicula.



7. Marble figure of a griffin, from the gable of a very large aedicula.



ROMAN FAMILY TOMBS continued

various flower forms in the coffers. The transition between the inner surface of the baldachin and the back wall of the tomb is effected by means of a carved conch shell. The outer sides of the baldachin are ornamented with griffins while on the front corners are winged genii in relief. The roof is flat. The lower part of the tomb was constructed of several marble blocks. In front, the baldachin was supported by two twisted columns.

A tomb belonging to the Ennii, a family of the time of Antoninus Pius, has been reconstructed by Prof. Klemenc, as shown in Figure 8. This tomb consists of a richly decorated cist surmounted by a baldachin. Unlike the baldachin mentioned above, this one has a gabled roof with double gutters and is supported in front by two columns and on the sides and back by marble slabs. The ceiling of this baldachin is also coffered, with flowers and other objects shown in relief (Figure 9), and it is joined to the back wall by a similar conch shell. Below this, on the back wall, is a relief showing the family—father, mother and daughter (Figure 10). The inner surfaces of the side walls are



8. The tomb of the Ennii, dating from the mid-second century, as it was reconstructed from blocks found in the gravel pit.



9. The elaborately coffered ceiling of the baldachin belonging to the tomb of the Ennius family.



10. Carved relief showing the Ennius family. Above are the father and mother; below, the daughter between mourning cupids.



11. Europa being carried by the bull across the sea, which is indicated by the dolphin and the regular waves. This relief comes from the tomb of the Ennii.



12. Herakles bringing Alcestis back from the underworld—a relief from a cinerary cist. The hero is identified by his club and lion skin. The side panels with their vases, birds and vines form a pleasing complement to the central panel.

ROMAN FAMILY TOMBS continued

carved to represent pilasters. The outer surface of the back wall is plain, while the sides have reliefs of animal scenes, such as a dog pursuing an antelope and a horse fleeing from a lion. Under the gable on the front is carved the head of an old man with a long beard. The base of this family shrine is an inscribed marble slab which forms the lid of the cist below. The walls of the cist are also elaborately carved: on the front is a relief of Europa and the bull (Figure 11), on one side a satyr attacking a nymph, on the other the Judgment of Paris.

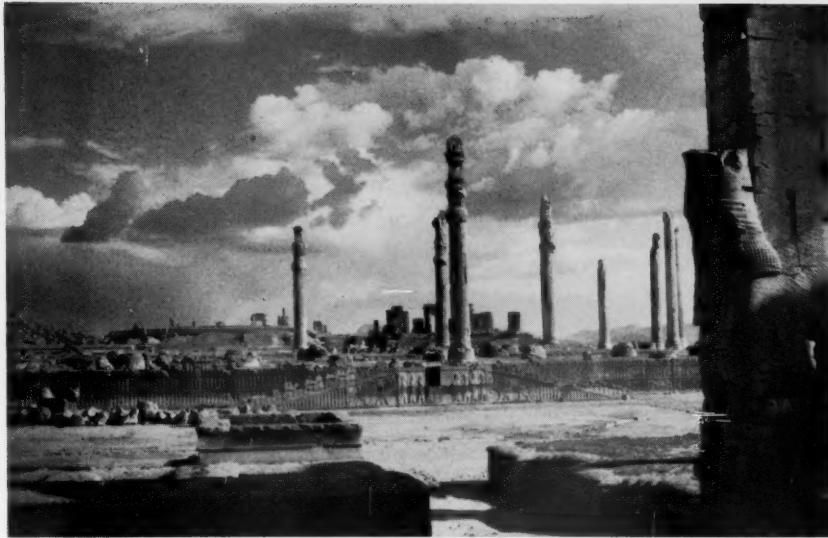
The remains of a third baldachin were found during the 1954-55 campaign. This must have been larger than the two described above, but it has not yet been possible to reconstruct its form.

Reliefs representing mythological figures or scenes decorate the sides of a number of marble cinerary cists. One of the most appealing shows Herakles leading Alcestis back from Hades (Figure 12). Another represents Ganymede being carried off by the eagle (Figure 13). An interesting example of crude provincial carving is a relief showing a hunter carrying a brace of birds and balancing on his shoulder a stick from which hangs a net with a bird's nest. A number of undecorated sandstone cists and sarcophagi were also found.

The most important discoveries made thus far have here been described briefly. A more complete picture of the Roman cemetery at Celeia, with its many reliefs and monuments, could result from further seasons of excavation.



13. Ganymede being carried off by the eagle of Zeus—a relief from a cinerary cist. Ganymede still clings to his bow, but leaves behind his dog and an unidentified object at the lower right.



1. View of the terrace mound of Persepolis from the Entrance Pavilion looking toward the Apadana.

PERSEPOLIS AS A RITUAL CITY

By ARTHUR UPHAM POPE

Chancellor Emeritus of the Asia Institute, New York

AT THE FOOT of a rugged little mountain in southern Persia there stand the gaunt yet majestic ruins of one of the supreme creations of antiquity—all that remains of Persepolis—which, in its grandeur, beauty and significance, marked the culminating achievement of the ancient Near East (Figure 1). The ruins have now been excavated, measured, photographed, the inscriptions read and published, thousands of tablets deciphered and the whole so thoroughly argued about that there would seem to be nothing more to be said.

The generally accepted view is that Persepolis was planned as the royal residence of the Achaemenid King of Kings, that these fabulous "palaces" constituted the capital of the empire, proclaimed the royal power and gratified the royal pride. According to this view, it was in intention and effect something like Hadrian's villa at Tivoli, or "a kind of Versailles." Yet the genuinely pious inscriptions reveal something more serious than the personal and worldly ambitions of a French or Roman monarch. Such inscriptions, like all fundamental aspects of ancient oriental culture, require for a just understanding that we should set aside or revise the natural assumptions

of modern Western thought and its emphasis on factuality and rationality, its secularity and over-confidence in literalness, for these are foreign to the emotional attitudes and mental habits of the ancient Near East.

The main problem of Persepolis has not yet been fully solved, and there is at least one real mystery. Just what did Darius have in mind when he planned Persepolis? To answer this we must remember that throughout the ancient Near East religious motivation was primary, and symbolism was the natural and universal form of thinking. The inscriptions proclaim in solemn language that the buildings were erected by the grace of God, that they attain a beauty, perfection and magnificence never before realized, and that, by the specific inspiration and protection of Ahura Mazda, the Persian kings were designated his agents on earth and mediators between the divine and the human world.

While it is obvious that buildings like the *tachara* (winter palace?) of Darius and his harem, and the palaces

The writer is under special obligation to Dr. Phyllis Ackerman for valuable suggestions, and to Dr. Erich Schmidt's magisterial account of Persepolis, Volume I.

PERSEPOLIS AS A RITUAL CITY *continued*

of Xerxes, Artaxerxes I and Artaxerxes II were royal residences, this does not alter the religious character of the group as a whole. The king, when present, must be nobly and exclusively housed as becomes both his religious and imperial authority. Furthermore, the theory that Persepolis was primarily a luxurious abode of the monarch does not accord with the simple fact that Persepolis was but little occupied. It was never, in any political sense, the capital. "Contrary to expectation the documents . . . are not of a political nature. There are no treatises, chronicles, annals, letters to or from satraps or edicts to distant outposts . . ." (George G. Cameron, *Persepolis Treasury Tablets* [Chicago 1946] page 9). It was too isolated to serve as a capital for the administration of a vast imperial domain. The Greek writer Xenophon tells us that the Achaemenid kings divided their time between the capitals at Susa, Ecbatana (Hamadan) and Babylon (*Anabasis* iii.5.15; *Cyropaedia* viii.6.22). Persepolis was apparently used only occasionally, too briefly to justify without good reason vast expenses of construction, which continued virtually without intermission from the time that the project was initiated by Darius in 515 B.C. until 330 B.C., when it was looted and partly destroyed by Alexander. That so much treasure and technical skill should have been poured into this relatively remote spot indicates that it had some special significance. Only if it were a symbol of some profound and central idea, vital for the life of the state as were the great ziggurats of Mesopotamia, and significant to the whole people, would such an effort have been justified.

Conscious of the possibilities of revolt and anarchy, of which he had had alarming experience at the outset of his

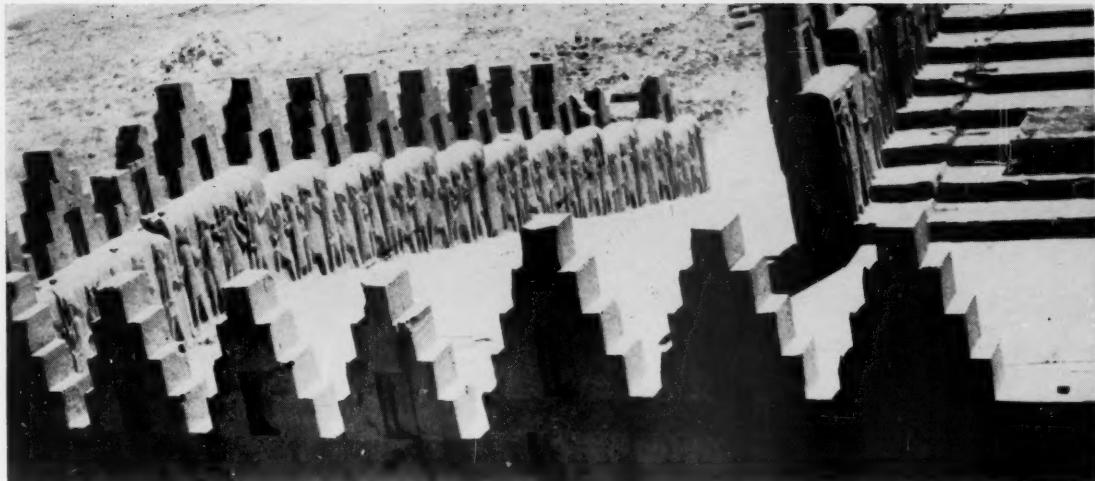
reign, Darius was aware that this sacred spot must be amply secured, all the more so as the greater part of the national treasure was deposited there. In several inscriptions Ahura Mazda is implored to protect this great work which he has inspired. The gates (Figure 2) are guarded by colossal mythical figures, majestic, divine, mysterious, living powers of formidable authority. And the sharp-pointed lance (a figure common even in the earliest painted pottery) deeply cut on the piers of the Treasury may also be a defensive symbol. The area was protected by a triple wall—and a stout garrison of the "Immortals," the Imperial Guard, represented on the great frieze with a monotonous iteration that suggests an army.

The older view that the state religion of the Achaemenids was Zoroastrian is no longer considered valid. Such a sharp reformation, ethically and intellectually so demanding, could neither win immediate popular acceptance nor be imposed by a relatively new imperial government which had to recognize the naturalistic polytheism of the people, their adherence to long established myths and practices, such as the worship of the mountain, the sacred tree, the bull, and especially the almost universal fertility rites. These convictions, which the king and court could not ignore, would be certain to exercise a formative role in official religious observances. It is for signs of old popular cults that we should look in seeking the meaning of Persepolis.

Characteristic of the ancient Near Eastern faiths were impressive ritual processions, particularly at the celebrations marking the turn of the seasons (especially the equinoxes), for it was crucial for prosperity, indeed for very existence, that these transitions occur without mishap.



2. Gateway of All Nations—Entrance Pavilion built by Xerxes, symbolizing the extent of his spiritual kingdom.



3. The stepped symbol of the sacred mountain, with double inset panel representing the gateway or entrance into the mountain on both sides of each "mountain." These crenelations, which crown the stairway railings and walls at Persepolis, are clearly symbolic and have no possible military value.

The peoples of the ancient Near East, and especially of Mesopotamia, were, as Frankfort has so ably expounded, intensely conscious of insecurity. They were convinced that the only assurance of survival lay in participation in the great cosmic events, through themselves enacting in parallel the cosmic processes and thus communicating their efforts to God (Henri Frankfort, *Kingship and the Gods* [Chicago 1948], especially chapters 20-22).

For these purposes they needed between themselves and the powers of Heaven a mediator like Darius who, according to one inscription, prays to Ahura Mazda and the other gods to protect "this country from famine"—one whose divinely invested authority could assure them of that vitalizing contact and harmonious participation in the cosmic order. There was also required a setting of beauty, grandeur and perfection, where the rituals so essential for the good life, indeed any life, could be performed with a fullness of pomp and power sufficient to command the beneficent cooperation of the powers of Heaven.

Persepolis perfectly fulfilled these requirements. Here the great ritual processions heralding the New Year (the spring equinox) could, by a dramatic and concrete display of abundance and fruitfulness, demonstrate to High Heaven the people's needs and by the force of sympathetic magic could thus constrain concord between earthly aspirations and their realization by the eternal powers.

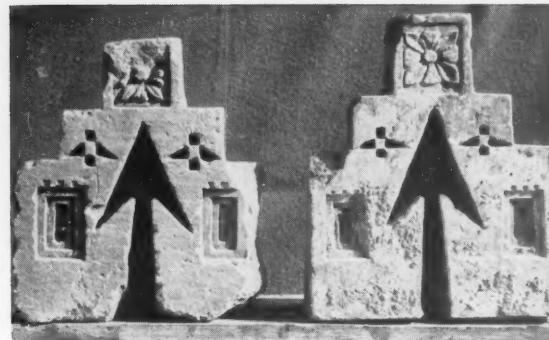
As the location of the sub-surface drains proves, Persepolis was planned as a whole and for a preconceived purpose, partly political and personal, but primarily religious. Persepolis was a ritual city, a Civitas Dei on earth,

reflecting the Civitas Coeli; it was imbued with the peculiar virtue of royal authority, conferred by the power of Ahura Mazda.

Many otherwise meaningless features of Persepolis become reasonable and significant when considered as symbolic expressions. For example, there are thousands of beautiful little rosettes distributed throughout the entire area. They are on the king's robe, his accoutrements; they form border-stripes on the great embroidered canopies and fill the framing bands of the endlessly long relief panels. Only if they have symbolic value can their endless repetition be justified, for other decorative patterns were available. That the rosettes were "mere ornament" is refuted by the fact that they are found carved on marble slabs placed under the pivot stones of all the doors, face down and invisible, in direct, potent contact with the soil (cf. Ernst E. Herzfeld, *Iran in the Ancient East* [New York 1941] page 233).

And what about the monotonous "crenelations" (Figure 3) that crown every wall? "Pleasantly ornamental," some commentators think; and most call them battlements, though from any military point of view they are useless—often placed where they could have no defensive value.

In reality they are symbols of the sacred mountain. The concept of the mountain has played a dominant role in the practical and religious thinking of the ancient orient for several thousand years. According to the earliest myths, the emergence of the mountain was the primal act of creation and the mountain itself the continuing source of fertility. As Frankfort put it: "Within [the moun-



Coping stones from Iranian fire temple at Surkh Kotal, in Afghanistan, show the continuity of Persepolis symbols—the mountain and the door into it, the rosette and the deeply cut lance point.

PERSEPOLIS AS A RITUAL CITY *continued*

tains] were concentrated the mysterious powers of life which bring forth vegetation . . . the habitual setting in which the superhuman becomes manifest." From the mountain emerges the sustaining force of life, and in winter when a threatening semi-death settles over the land, or the vegetation wilts during the equally destructive heat of summer, it is the mountain that holds promise of renewal. Since all things are managed by the gods, the imminent death of the world must be due to the withdrawal or imprisonment in the mountain of the special gods of fertility, Marduk in Babylonia, Assur in Assyria, Lillu in Sumer, Anahit and associates in Persia. These imprisoned powers must, by concerted prayers and demonstration, be rescued and released that the earth may be renewed and life resumed.

This almost universal myth expresses a basic physical fact. Near Eastern cultures are mountain-derived. Where rainfall is deficient, the mountain gathering snow or congealing moisture from passing clouds becomes the great reservoir and sends life-giving streams into the thirsty lands. If there is any security in these regions, the beneficent mountain provides it. This beneficence is not a single occurrence, but a renewable blessing which man must help evoke.

Accordingly, the mountain in these lands is the object of attention and reverence at all times, and must play an important role in the crucial New Year's festival. Hence the ubiquity of images of the mountain, which is represented in several ways: in the colossal ziggurats or pyramids or in the symbolically equivalent stepped platforms, or the "crenelations" on the walls of Persepolis. These miniature stepped pyramids are almost pictographs of the

sacred mountain and have been used as such for over five thousand years. The mountain pictograph appears on the early pottery from Persepolis, Nihavand and Assur; it crowns the rock-cut tombs at Da u Dukhtar, not far from Persepolis; it is on a Hebrew altar (*Ezekiel 43:13-18*); and it forms the base of the tomb of Cyrus. It is found on a fire temple of the second or early third century A.D. in Afghanistan (Figure 4). In Sasanian times it forms the crown of kings and the coping of sacred buildings; it appears in late Sasanian-type textiles in connection with a mountain god; it occurs in tribal rugs, and survives painted on wooden doors in southern Arabia today. The panel inset in the crenelation marks the gateway by which the fertility god enters the mountain and through which he will triumphantly emerge in response to the supplication of king and people. The panel is an encouraging prophecy of return.

The Entrance Pavilion built by Xerxes (see Figure 2) presents baffling problems if viewed strictly as architecture. These problems are largely resolved if it is viewed in its symbolic function as the "Gate of All Nations," which are thus declared to have access to the Holy Place, and to be within the legitimate spiritual domain of the King of Kings, the surrogate on earth of the Great God Ahura Mazda. The columns (Figure 5) represent trees. The column capitals of the portal and tripylon porch are obvious representations of the sacred palm, with its characteristic collar of pendant dead leaves. The Apadana of Xerxes and the Hall of a Hundred Columns each represented a sacred grove, which the vast interior must have suggested, since the multiple columns concealing the walls would alone be visible. The bell-shaped base,

5. Columns displaying emblems of life or life-giving powers. Each base is an inverted lotus, while the shaft and capital clearly represent the sacred palm with its corona of dead fronds.



6. Capital formed of joined foreparts of two bulls. These capitals, which crowned the columns of the Apadana, symbolize the generative potency of the sacred bull revivifying the trees.



7. Ahura Mazda emerging through winged solar disc—a reassuring vision of the beneficent and life-giving Supreme Power.

PERSEPOLIS AS A RITUAL CITY *continued*

beautiful as it is, is not primarily an aesthetic device, but a representation of the inverted lotus—again a symbol of life-giving power. The handsome and powerful protome capitals bespeak the intense vitality and the renowned reproductive power of the bull (Figure 6). Hence he crowns the column representing the palm tree in order to revive its life. Bull worship had been for at least two thousand years an important element in the religion of West Asia.

And what of the reliefs? They also proclaim the sacred character of the entire structure: the frequent appearance of the Ahura Mazda symbol; the representations of the Great God himself (Figure 7); the man-headed bulls, supreme expressions of power and beneficence; the solemn sphinxes with paws uplifted in adoration touching the sacred palm; throne scenes with incense-burners in the form of palm trees covered by a model of the cosmic mountain.

The constantly recurring themes are especially significant: the lion slaying the bull (Figure 8) and the king slaying the lion (Figure 9) and related cosmic monsters. Their meaning is not wholly clear. Since lion and bull are figures of the zodiac and since they are apparently

associated with the celebration of the Iranian New Year coinciding with the spring equinox, Herzfeld suggested that this scene has astronomical meaning (*Iran in the Ancient East*, page 251). The lion may represent the sun when in the constellation Leo, and thus at the height of its power which all too soon blasts and withers the precious springtime green, bringing drought and threatening ruin and death. Ultimately it must be slain to permit the winter rains to replenish the earth. A primary task of the king is to extinguish this all-devouring fire, a difficult and dangerous task, which is proof of his mettle and his divine power.

The bull, on the other hand, is associated with the crescent moon, hence with the night, coolness, the dew and the precious rains. But these can last too long. The cold downpour of a late spring rain may threaten the new crops or dangerously retard them, thus exposing immature growth to devastating summer heat. The bull, symbolic of the winter rains, might well outstay his welcome. He, too, must be slain and he is the destined victim of the ferocious sun-lion. Only the timely symbolic death of these two personifications of the seasons will permit productivity.

8. Winged lion representing the sun, slaying the bull, probably symbolic of the winter rains, which must be checked in time. Both have zodiacal counterparts associated with seasonal rotation.



All these symbols have clear antecedents in the Near East; some are quite conventional, others are given new expression. Some are to be found on other royal buildings elsewhere, but there seems to be no precedent for the total combination at Persepolis, nor any such emphatic symbol of the sacred mountain, which is so conspicuous at Persepolis and such an essential part of the spring festival.

The main theme of the reliefs (Figure 10), exclusive of incidental figures, is the New Year's festival with its tribute procession—nearly a thousand feet depicting a multitude of envoys from twenty-three nations bearing rich gifts. The list is impressive: magnificent horses, blooded stock, thick-fleeced rams, superior camels, a zebra, a superb wild ass, an antelope, a giraffe and a lioness with cubs. Among the objects are massive gold armlets, full sacks of wine, golden bowls and vessels, covered bowls, perhaps containing pearls, heavy fabrics and furs, a royal chariot and a throne. Well might the king say, "The earth is mine and the fullness thereof." A tribute procession it was but even more—it was a concrete demonstration of perfect abundance, the fulfillment of man's labor and hope. Here was an eloquent demonstra-

9. The king, as high priest and surrogate of the supreme god, slaying the sun-lion, which must in turn be checked before the land is burned up.



tion to High Heaven, a declaration as to what was needed for the New Year. For here, as in Egypt and Babylonia, as well as in China, it was the New Year's festival itself that was felt to have crucial power and to be an essential factor in the transition of the seasons. Human cooperation with the divine forces was indispensable, and in these superb friezes we have a representation of the actual ceremonies for which Persepolis was the tremendous stage.

What about the mystery? Persepolis was sensational in size, of unbelievable opulence, unprecedented in grandeur and beauty. Yet it was almost unknown outside the Persian empire. The Old Testament, which is so specific concerning the palaces of Susa and Ecbatana and has much to say about Artaxerxes, who was at that very time engaged in construction at Persepolis, is silent concerning that place. There is no reference to it in Babylonian or Assyrian documents, no word in Phoenician. Although Persepolis had been under construction for nearly two hundred years, the Greeks seem never to have heard of it until the time of Alexander; and Ktesias, the Greek physician who spent twenty-four years at the Persian court, wrote fully about the court, yet in none of the surviving sections of his texts is there any mention of Persepolis. Why such a strange silence?

It was, of course, the most sacred spot in Persia, a veritable Holy of Holies, with the exclusiveness normal in an oriental religion. Furthermore, Persepolis had an added significance. It was in the homeland of the semi-divine Achaemenid monarchs who with God's will had wrought such marvels throughout the world. This was the locale of the divine investiture. At nearby Pasargadae the kings were crowned; here, close to Persepolis, they were buried. It was like Arbela, the sacred city of Assyria, a place so holy and special that it was not to be shared with foreigners unless they were members of the empire—their ultimate privilege and destiny.

Although fortified, and required to be kept inviolate, Persepolis was not a fort nor was it controlled by military considerations. The palaces for the kings when in residence were in a sense incidental. The main function of Persepolis was to provide a splendid setting to reflect on earth the heaven above, and by its grandeur and transcendent beauty to lend irresistible power to the appeal of king and people, and to induce the gods to re-enact on earth this demonstration of abundance.

The notion of the sacred mountain, the holy tree, and other fertility beliefs and rites arose with man's reflective awareness of the precariousness of life and his dependence upon powers that, with suitable propitiation, might alle-



10. A section of the frieze showing the New Year's procession with the participants bringing gifts of symbolic fertility, abundance and prosperity.

PERSEPOLIS AS A RITUAL CITY *continued*

viate his situation. Through thousands of years these fertility myths and ritual practices continued to develop in the Near East and in much of Asia—evidence that they seemed valid and necessary. They continue in residual forms and celebrations down to the present, particularly the Nawruz (New Year's) festival in Persia, the greatest day of the year.

These celebrations are almost exactly like those of Sasanian times. The Nawruz festival is quite independent of the Muhammadan calendar or Islamic ritual. It was under the Sasanians, and for centuries before, as it is now, a day of rejoicing shared by all. Now, as then, people arise early on that happy day, dress in their finest clothes, visit one another, exchange presents, hold feasts and set out in each home seven different kinds of green plants. Now, as then, they throw water at one another and light fires, symbolizing the blessed rains and the fructifying warmth of the sun, singing as they jump over the fire, "May your red color pass into me." It is a day for getting problems solved, a day of rejoicing, of hopeful prophecy, of happiness and well-being. In Achaemenid and Sasanian times, and probably earlier, gifts to

the king from nobles and officials were compulsory, but—what has not been sufficiently stressed—they were returnable, much augmented, if the donor should later be in need. If a donor presented even an orange to the king it was duly recorded, and if the donor subsequently found himself in want, he would receive from the king an orange filled with gold (Arthur Christensen, *L'Iran sous les Sasanides* [Copenhagen 1936] page 403).

The meaning was obvious. If one rendered to the gods the offerings and obedience due them, then in an hour of need the return of life-sustaining benefits would be ample and assured.

Thus Persepolis and its rituals were not merely the expression of the pomp and glory of the Achaemenid kings. They were primarily the expression of a theory of the control of the natural world by the powers of Heaven and of man's unceasing need for the cooperation of divine forces for the maintenance on earth of a secure and abundant life.

Figures 1, 3, 5, 8 and 9 by Rostamy, Teheran Museum; Figures 2, 6 and 7 courtesy of The Oriental Institute, University of Chicago; Figure 4 courtesy of D. Schlumberger; Figure 10, United States Army photograph.

MOTYA AND LILYBAEUM

By G. ALDO RUGGIERI

Honorary Inspector of Antiquities, Marsala

JUST OFF THE WEST COAST of Sicily there emerge from the sea four small islands, Isola Lunga, La Scola, Santa Maria and Motya, all of them rich in vineyards and luxuriant in vegetation. Queen among them is Motya. This island, only a few square kilometers in size, is especially interesting for its historical associations, recorded by the great historians of antiquity.

Nowadays Motya is a silent and picturesque little island where the whispering of the pines and the palm trees mingles with the fragrance of the sea and of the green seaweed which rises from it like fantastic tropical blossoms. But in centuries long past Motya was a great city, vibrating with the sounds of industrial activity. The Phoenicians, those splendid navigators, always on the lookout for new trade, founded at Motya, at about the end of the eighth century B.C., one of their largest and most active commercial towns. It served as a military supply base for their attacks on the strong Greek cities of Sicily, such as Akragas and Syracuse. The largest of the Phoenician colonies, it became one of the Carthaginians' best defended and most secure footholds in Sicily.

But Motya, like the other Phoenician towns of western Sicily, underwent a decline when Himera was lost to Gelon, tyrant of Syracuse (480 B.C.). The Greek cities maintained a preeminence which affected not only the life but also the art, the dress and the coinage of Motya. When through the initiative of Hannibal, who had the support of a great naval and mercantile fleet of sixteen hundred ships, the rescue of Carthage was achieved (409 B.C.), Carthage then reconquered Himera in only three months, destroying it along with Selinus, annexing their territories, and succeeding in occupying the most distant provinces up to the mountains of Madonia. Motya then regained her status as a great port and as a center of expansion of Punic markets, and at the same time as a link with the capital in Africa.

This is the period, beginning in 409 B.C., just after the destruction of Himera, in which Motya enjoyed a prosperity such as it never had before or after. Industry prospered, and raw materials were brought from Africa and Asia to be worked and finished there. Taste became re-

fined and as a result of Greek domination a new spirit was brought into the art of textile making; brilliant purple colors were derived from the molluscs which abounded in the Stagno, the bay adjoining the town. The local textile products became more valued and sought after. The ceramic industry, in which the most expert artisans were employed, furnished splendid vases for the tables of rich merchants and also satisfied the needs of the simple citizens.

The city was fortified and beautified; strong walls surrounded it, leaving only a passage through hidden canals which brought ships loaded with grain and olive oil to the center of the city. The outer harbor was very large and frequented by battleships and merchantmen. These had to sail through narrow passages between underwater reefs, while for enemy ships it was impossible to find a passage which would not be dangerous or even fatal. One single artificial road at water level united the island with the mainland, and this road was closed at both ends by two great gates which could be defended.

But Motya suffered a great deal from the duel between Carthage and her Sicilian foes. The Syracusans, after having conquered the cities allied with the Carthaginians—Solunto, Panormus, Segesta and Entella, attacked Motya, and the Syracusan army, commanded by the tyrant Dionysius I, invested the island with a force of 80,000 foot soldiers and with a fleet of light ships.

The heroic defenders, after destroying the road to the mainland and thus depriving themselves of reinforcements, resisted with all their strength, but nothing could stand against the violence and craftiness of Dionysius. The Syracusans rebuilt the road, brought up their war machines and opened great breaches in the walls. The city was hopelessly lost. The Motyans fought to the last man; many were taken prisoner and led into slavery.

The destruction of all this work of centuries was then accomplished (397 B.C.) and the surviving Motyans, abandoned to their fate by the Carthaginian general

In this article Professor Ruggieri has had the collaboration of Professor Nicola Savalla, who also assisted in the preparation of the photographs.



Part of the north side of the city wall of Motya, showing a stairway leading to sentry posts.

MOTYA AND LILYBAEUM *continued*

Himilco, did not have the strength to raise their heads from the smoking ruins. They left their city, which could not possibly be rebuilt, and moved to the mainland.

A small mercantile town had for some time been growing on the extreme point of Sicily, facing toward Africa: Lilybaeum. Here the refugees established their tents and tried to rebuild a home.

In a few years Lilybaeum became a flourishing town and naval base of the first rank, which compensated Carthage for the loss of Motya. Pyrrhus, who by 276 B.C. had already conquered most of Sicily, tried to attack Lilybaeum, but met formidable resistance which compelled him to give up the siege.

In the First Punic War Lilybaeum underwent a ten-year siege by the Romans (250 to 241 B.C.) but was never captured; its surrender resulted from the peace conditions which the Romans imposed on the Carthaginians after the victory of Lutatius Catulus in the waters around the Aegadian Islands.

Under Roman rule the fortress of Lilybaeum did not lose its importance; rather, it acquired more when it was chosen as a military port. From here the Roman armies embarked upon their Mediterranean campaigns: from Lilybaeum Scipio Africanus set out against Hannibal for the decisive battle of Zama (202 B.C.) and from here also Caesar set out toward Hadrumetum against the armies of Pompey (47 B.C.).

At Lilybaeum fine coins were minted and there developed the arts and industries proper to a marine town; certainly, even then, there was appreciation of the wine of the yellow grapes cultivated by the soldiers who had turned farmers; and that, as well as the mild climate and the enchantment of the landscape, caused the Romans to wish to stay on these shores. Cicero, who was sent to Lilybaeum for some time as *quaestor*, called it with unconditional admiration *splendidissima urbs*, "the most splendid city."

Lilybaeum grew and flourished, reflecting the changes



Double gate in Motya's north wall, which leads to the road uniting the island to the mainland.



A sculptured group showing two lions attacking a bull, from the so-called Lion Gate of Motya.

in Roman social, political and military life. Centuries passed, rulers came and went, but Lilybaeum was always treated especially well because of its charm. When the Saracens came they baptized it Marsa-Allah (port of God, whence comes its present name of Marsala); the Normans and all the others came too, bringing a strange mixture of civilization and barbarism, destroying and reconstructing and always wiping out the past. The passage of time and people has not succeeded completely in triumphing over ancient Lilybaeum: today there still come to light streets, columns, mosaics, villas, all glorious traces of a great civilization.

At Motya the archaeological discoveries correspond fully to the accounts of the ancient historians. The powerful walls built of great stone blocks perfectly squared in the Greek fashion remind one of Cyclopean masonry, of epic grandeur, of the battles, of the clash of battering rams, of the terrific din of ancient warfare which ended so tragically for the Motyans. In the wide streets can clearly be seen traces of cart wheels, and there are remains of the two great city gates whose doors turned on bronze hinges, one at the south, the other at the north where the road led toward the mainland.

Few buildings of the ancient city can be distinguished; in these are preserved a few simple mosaics made with black and white pebbles, in which can be studied Punic-Phoenician design. These are examples of the technique which preceded the true mosaic art. In the original cemetery of the island, partly covered by the first fortifications of the fifth century B.C., have been revealed tombs—rectangular pits dug in sandstone, where the ashes from cremation burials were deposited. Cinerary vases of terra cotta were sometimes used; these were locally made and of characteristic Punic form, with geometric decoration in dark brown. The rich remains of the cemetery on the

mainland, situated at the end of the road we have mentioned, are assembled in the Motya museum—funerary furniture found with Protocorinthian vases certainly inspired, if not manufactured, by Greek artisans.

In the new cemetery of Motya (now the region of Birgi) have been found stone sepulchers, since toward the fourth century B.C. arose the custom of burying the dead with perfume and unguent vases. These vases show the great influence of Attic pottery or, more probably, they were actually imported from Greek cities. Most valued were the small "Phoenician" glass vases found in the tombs. It is interesting to observe the relation of artistic styles to the historical changes which came to the city in the course of time.

Lilybaeum was the principal bridge for the traffic between Rome and her empire in Africa and Asia, and to it came the influences of the civilization of these coastal people and of Oriental peoples in general. This is why the mosaics recently discovered show Oriental influence. In them can be seen ornamental characteristics which are found in similar and more famous Sicilian mosaics; those at Lilybaeum are striking because of their effective coloring and composition characterized by simplicity of design and execution.

A group of mosaic pavements belongs to a great building constructed a short distance from the seacoast, which must have been a large and elegant villa with unusual baths. We perceive in the wonderful designs of the smaller mosaics a combination of Roman pictorial stylization and arabesque fantasy, resulting in a beautiful rhythmic pattern. If, as seems certain, Lilybaeum was settled by the people who resided in Motya, we can explain how this Oriental taste is frequently met in the large stone carpets. In the central mosaic we find other elements which prove even more that local mosaic art



Terracotta statuette of a mother and child, in the Motya museum.

MOTYA AND LILYBAEUM *continued*

came under Phoenician-Punic influence. There are scenes in which hungry and infuriated wild beasts assault their victims—a lion with tawny, tousled mane attacks a frightened horse, a lioness springs upon a goat, an enormous striped tiger claws a gentle gazelle, a spotted panther pounces ferociously upon an antlered stag. These scenes are arranged in a great circle and the visitor who walks around is astonished at the liveliness and the rush of movement. The powerful effect is obtained with the simplest use of pure colors in a composition most pleasantly completed in a series of rectangles; in each of these are included fantastic elements such as large snail shells from which emerge the bodies of beasts.

Although scenes of the chase are common in the mosaics of the Roman cities of Sicily, those at Lilybaeum, as well as the pavements with geometric designs and others with arabesques, suggest an art not yet corrupted by the stereotyped Roman mosaics of the second and third centuries A.D. One imagines that these mosaics belong to the first Roman period, perhaps the first century B.C.—earlier than the mosaics of Piazza Armerina in the province of Caltanissetta, which are of the third or fourth century A.D. Some say authoritatively that the mosaics of Lilybaeum date from the first or second century A.D., but in this case it is difficult to explain the abundance of Punic-Phoenician motives which must be due to the quick acceptance by the Romans of Oriental or African customs and tastes. And it is easy to imagine that those who lived in these comfortable villas by the sea wished to reproduce the scenes of life and the enamel-like colors which they had learned to love on the African continent during their expeditions for war or trade.

The present excavations at Lilybaeum have brought to light great complexes, perhaps a palaestra and a small bath, which apparently belong to two areas of construction, if we take into account the quantity of plumbing arrangements and the heating system for the rooms. This consists of a passage for hot air within the thickness of the walls and below the pavement which is supported on columns of heat-conducting material. There are special furnaces to provide the currents of heat.

Deep silos and water cisterns, still perfectly preserved, were constructed within the building, suggesting that it was necessary to store great quantities of supplies and to have available large amounts of water, perhaps because a great number of people lived in the villa. Two large pools, whose marble revetment can still be seen, with two inlets for cold water, completed the arrangement of this remarkable villa.

The complex includes two wings, one evidently belonging to the bath, with divisions for the *sudarium*, the *calidarium* and the *tepidarium* (the latter with mosaics of wild beasts), the other containing a room whose mosaics seem to show that it was used for artistic and cultural gatherings. This wing was reached by a long, wide corridor with a mosaic pavement remarkable for its geometric designs as well as for a fine head of Medusa. The corridor leads to large rooms with beautiful geometric mosaics, their colors rendering perfectly the colorfulness and the spontaneous spirit of Sicily. These mosaics are surrounded by many structures which deserve still more study, as well as the later Byzantine and Arab strata, which have made the work of excavation very difficult and delicate.



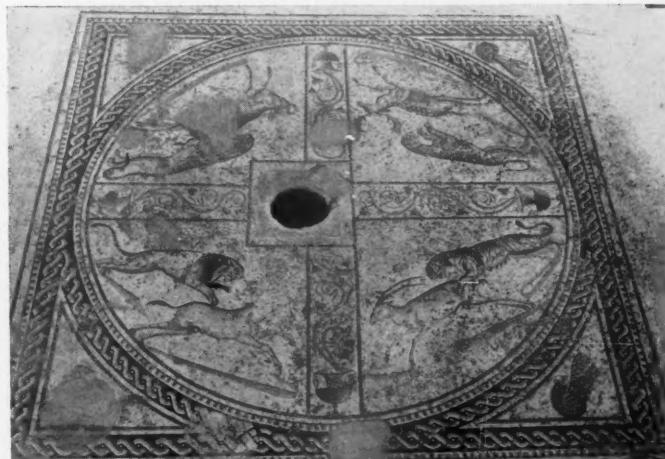
Lilybaeum: view of the excavations, showing the Roman villa.



Mosaic "stone carpet" with a striking geometric pattern, from the villa at Lilybaeum.



Detail of a mosaic in the villa which clearly shows Phoenician-Punic influence.



Mosaic in the villa at Lilybaeum—a circle enclosed in a square. In each of the four segments of the circle is shown a wild beast attacking its prey. In each corner, outside the circle, is an animal emerging from a snail shell.



Head of Medusa portrayed in a mosaic of the villa at Lilybaeum.



"Cave canem"—a mosaic at the villa warning strangers of the dog.



Detail of a mosaic showing an interlace and geometric figures.

MOTYA AND LILYBAEUM *continued*

One reaches this small oasis of pure pleasure and of blessed leisure across a portico overlooking the crescent of Stagno Bay, on whose horizon can be seen the green pines of Motya and the other islands which form its crown. It is a lovely vision framed between the Aegadian isles and splendid Mt. Eryx.

During the last two years important events have occurred in Motya. In the summer of 1955 an expedition under the leadership of Dr. B. S. J. Isserlin of Oxford University made some soundings which have prepared the ground for new explorations which should at last bring to light

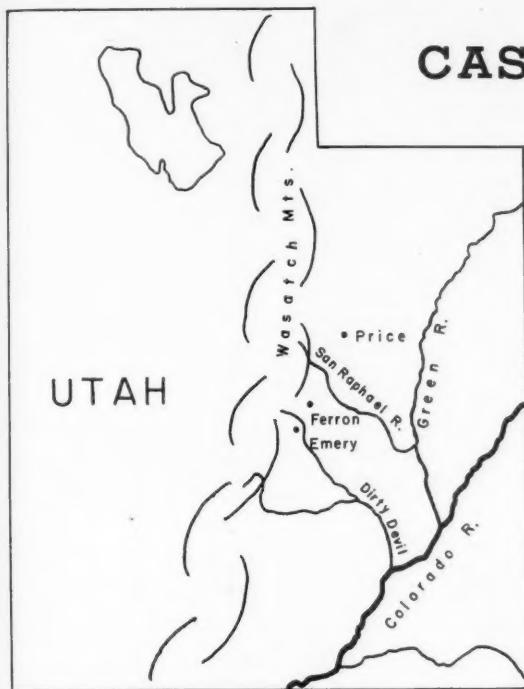
the Punic fortress. (See *Antiquity* 30 [1956] 110-113.)

In the summer of 1956 the Superintendent of Antiquities in Palermo ordered some restorations of walls and buildings. In the course of the work new sections of walls and stairways were discovered. The work of restoration made it possible for the general public to understand the construction and plan of these important walls.

But much more is still to be done in the vicinity of Motya and Lilybaeum. New exploration in the necropolis of Birgi would bring to light very rich Phoenician burial offerings, mostly objects of glass, worthy of any museum in the world.

PREHISTORIC FIGURINES FROM

CASTLE VALLEY



By JAMES H. GUNNERSON

• The author is Curator of the Museum of Anthropology at the University of Utah and Field Director of the Utah Statewide Archeological Survey. In the past his work has been in the Plains, especially in western Nebraska. Since 1954 he has been working primarily with the Fremont Culture in northeastern and east central Utah. Mr. Gunnerson wishes to acknowledge the generosity of Mr. Homer Behunin who gave permission for the study of the figurines. This study was financed in part by the University of Utah Research Fund.

FROM CASTLE VALLEY in east central Utah have come some unusual archaeological specimens. Among the most interesting are three wooden figurines discovered by Mr. Homer Behunin.

Castle Valley provides an appropriate setting for finding the unusual. Along its west wall erosion of the east face of the Wasatch Plateau has left "castle towers" of crumbling gray stone. These lend an atmosphere of decadent antiquity, heightened wherever an occasional farmstead affords the vivid contrast of poplars, cottonwoods and alfalfa fields. From the gray escarpment can be seen, to the east, other castle-like remnants carved by erosion from the rock of the San Raphael Swell. And between the Wasatch Plateau and the Swell lies Castle Valley itself, extending from Price to beyond Emery. It is nearly a desert land, relieved only at intervals by small streams which head on the plateau and flow across the valley, finally to join the San Raphael River or the Dirty Devil.

For a few miles out from the plateau and in narrow canyons which finger into the cliffs, small streams provide fresh water and tillable land. In such areas is concen-

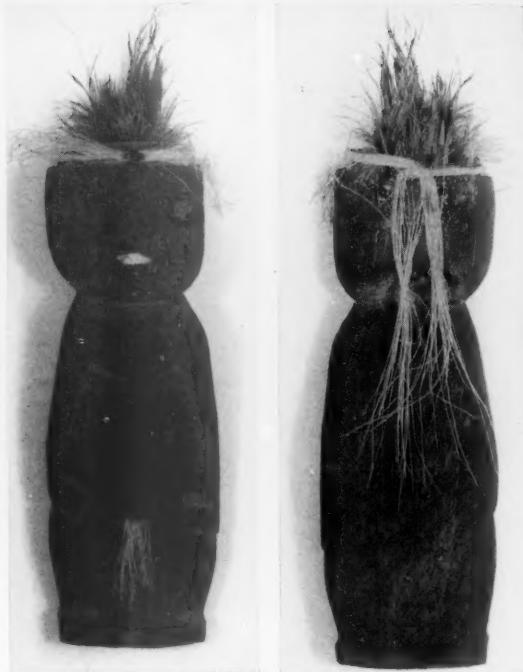
trated not only the present population of Castle Valley but also the village remains of the prehistoric inhabitants.

Mr. Behunin's figurines were not associated with aboriginal habitations, but were isolated finds. A pair of wooden kachina-like figurines (Figures 1 and 2) was found on the north side of Ferron Canyon, about a thousand feet up the valley wall, at the edge of a small plateau. There a crevice in an enormous split boulder had been walled up with stone, and the resulting enclosure had been filled with cedar bark. When the bark was removed the two figurines were the only objects found. They are carved partially in the round, but details of arms, breasts and facial features are outlined with grooves or are carved in low relief. The figurines were well smoothed except for the grooves, which still show striations. Both figurines are quite flat, only about two centimeters thick.

The figure without a headdress (Figure 1) has masculine body proportions, but the breasts identify it as female. It is reddish in color, especially on the face, breasts and arms, as though stained with red ocher. Its clothing consists of a pubic apron and a covering in back extending



1. One of a pair of wooden figurines found near Ferron Creek, east central Utah. Front and back views are shown. The breasts identify the figure as female. Height 17.6 cm.



2. A wooden figurine (front and back views) found with that shown in Figure 1. The figure is presumed to be male since breasts are lacking. Height (without headdress) 15.8 cm.

PREHISTORIC FIGURINES *continued*

from the shoulders to well below the knees. Both garments are made of deer or antelope hairs (not parts of pelts) stuck on with a black gum which may be gilsonite. The hair on the back has a slight red stain on it. Arm bands are indicated by incision, the fingers and facial features by grooves.

The other figurine (Figure 2) has body proportions suggestive of a woman, but it must be male as no breasts are depicted. The only clothing is a small pubic apron of hair similar to that on the companion piece. The eyes, smooth pieces of red stone, and the mouth, a smooth fragment of white stone, were cemented into depressions with pitch. The part of the hair or headdress which stands upright is of cedar bark, and the lighter colored strands around the head and hanging down the back are of an unidentified plant fiber. Both are held in place with pitch or gum. This figurine is much darker than its companion and shows no red stain or arm bands. The offset border surrounding the face of the first figurine and that across the top of the head of the second suggest kachina head-dresses. Both figures are too simple in detail to be compared with specific kachina dolls.

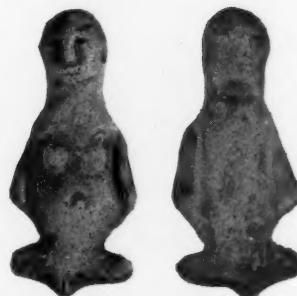
At the base of the canyon wall on the south side of Ferron Canyon a third wooden figurine (Figure 3) was found wrapped in a reed mat which had been thrust into a protecting rock crevice. Although a pictograph panel occurs about a hundred feet away, there was no associated material. The site is near the upper end of the most intensively occupied portion of Ferron Valley. This figurine, which appears to represent a pregnant woman, was carved almost entirely in the round. The eyes are slits inlaid with small round pellets of a blue-green stone (not turquoise). A hank of rather coarse black hair, probably human, was passed through a hole in the lower part of the back of the head and then braided. One rather baffling feature is the sagittal crest, which does not seem to represent any sort of hair style.

All three figurines are made of a light-weight wood which was stained a dark color. All were made by a technique of carving and scraping which has been observed on several specimens of Anasazi Basketmaker wood carving.

An interesting figurine of fired clay, apparently representing a pregnant woman (Figure 4), was also found



3. Three views of a wooden figurine, probably representing a pregnant woman, found near Ferron Creek, east central Utah. The wood has a slightly oily texture. Height 20.9 cm.



5. Carved stone figure, probably female, found about twenty miles southwest of Ferron. Front view at left, back view at right. Height 7.1 cm.



4. Fired clay figurine representing a pregnant woman, found five miles east of Ferron, Utah. Height 6.1 cm.



6. Clay figurines (front view above, back view below), accidentally fired during the burning of a pit-house southwest of Ferron, Utah. Height of middle figurine 6.5 cm. (See Dee C. Taylor, "Archeological Excavations near Salina, Utah" in *Utah Archeology* 1, No. 4, pages 3-8.)

PREHISTORIC FIGURINES *continued*

near Ferron. In this greater emphasis than usual is placed on the sexual characteristics. Another figurine, probably female (Figure 5), came from about twenty miles southwest of Ferron. This specimen is carved from a coarse red stone. While the workmanship is crude, details such as hair are represented.

Although these figurines were all found under uncontrolled conditions, the technique of carving and the lack of evidence for the use of modern tools suggests that they are authentic. Their execution, though simple, is highly effective and leaves little doubt as to their indigenous origin. Because of the lack of associated material it is impossible to ascribe the wooden figurines to a specific aboriginal group. It seems probable, however, that they were made by the Fremont people, who occupied most of the archaeological sites in the area.

This group occupied Castle Valley between ca. A.D. 800 and ca. 1200. They built numerous small but permanent villages and cultivated the then well-watered stream valleys. They hunted and probably gathered wild foods.

Their culture was either related to or strongly influenced by that of the Anasazi-Pueblo people who lived in the Four Corners area where Utah, Colorado, New Mexico and Arizona touch. Small anthropomorphic figurines were apparently an important element in the ceremonial life of the Fremont people. Most of their known figurines are of unfired clay. Five of these (Figure 6) were found in a Fremont pit-house during the University of Utah's 1955 excavation some thirty miles southwest of Ferron, and a group of eleven was found in a small cave on a branch of Range Creek Canyon (Noel Morss, *Clay Figurines of the American Southwest* [Cambridge 1954] pages 3-7) about sixty miles northeast of Ferron. It seems likely that such figurines may originally have been paired, since nearly equal numbers of males and females have been found in each group. This equal representation of males and females, the pairing of the wooden male and female found in the split boulder, and the indication of pregnancy in the single female figures suggest that such figurines were used in ceremonies concerned with fertility.





ARCHAEOLOGICAL NEWS

Obituaries

Recent deaths in the field of archaeology include those of the following well known scholars:

LADY PETRIE, widow of the pioneer Egyptologist Sir Flinders Petrie, who was her husband's collaborator for fifty years and edited his manuscripts after his death in 1942 (died November 23, 1956 at the age of eighty-five);

LOUIS E. LORD, former president of the ARCHAEOLOGICAL INSTITUTE, professor of Classics and Archaeology at Oberlin College and other institutions, and for many years Chairman of the Managing Committee of the American School of Classical Studies at Athens (died January 24, 1957 at the age of eighty-three);

CLARENCE H. YOUNG, professor emeritus of Greek Archaeology at Columbia University (died April 5, 1957 at the age of ninety);

AGNES NEWHALL STILLWELL, authority on Greek ceramics, who excavated the Potters' Quarter at Corinth and published that important site (died April 8, 1957 at the age of fifty-one);

GAETANO DE SANCTIS, noted historian of the Classical world, professor emeritus of the University of Rome (died April 9, 1957 at the age of eighty-six);

SEAN P. O'RIORDAIN, Professor of Archaeology at University College, Dublin, and excavator of Tara, the seat of ancient Irish kings (died April 11, 1957 at the age of fifty-two).

Kansas AIA Society

The youngest member Society of the ARCHAEOLOGICAL INSTITUTE OF AMERICA is the Kansas Society, which was officially admitted on December 19, 1956. At present it has thirty members. The officers are: Thor E. Bogren, Jr., President; Dr. James E. Seaver, Vice President; Dr. John H. Patton, Secretary-Treasurer.

Congress of Classical Archaeology

The Seventh International Congress of Classical Archaeology, which had been announced for September of this year, has now been postponed until September 1958. The place of meeting has been transferred from Pavia to Rome and Naples. Professor Amède Maiuri is the president of the Congress. The General Secretary is Professor Pietro Romanelli; the office is at 49 Piazza San Marco, Rome, Italy.

The registration fee for the Congress is \$6.00. This sum may be paid through any bank to account No. 5900/1 of the Banca Commerciale Italiana, Piazza Venezia Branch, Rome.

Excavations in Coele-Syria

The following account of an exploratory excavation has been sent us by Dr. D. C. Baramki, Curator of the Museum of the American University of Beirut. He hopes to continue work at the site this summer.

Although the American University of Beirut possesses the oldest archaeological museum east of the Suez Canal, yet for various reasons it has not been able in the past to undertake the excavation of any major historical site. In July of last year, however, while some laborers were loosening the soil at the University's agricultural farm at Hosh Sneid in the Beqa, they discovered a number of ancient pots and other artifacts. The Dean of the School of Agriculture immediately stopped further work in the area, and a small sum of money was placed at the disposal of the Museum Curator to examine the nature of the site.

The discovery was made at the foot of the slope of Tell el-Ghassil, one of several artificial mounds which dot the Beqa, or Coele-Syria, from north to south. Two soundings were made, one near the area of the discovery, the other farther up the slope.

No traces of walls appeared in the lower of the two soundings, but a number of stone hearths were found, which indicated occupation by tent dwellers. In the debris was found pottery ranging from the Chalcolithic to the Late Bronze Age, mostly in fragments, but it also included one complete piriform juglet of Middle Bronze Age II. The Chalcolithic and Early Bronze Age levels produced a number of sherds; although the levels were clearly stratified the sherds appear to have been discards of broken vessels. But the pottery in the Middle Bronze I level was more abundant, and appeared to be closely related to the hearths of the tent dwellers; this possibly associates them with the arrival of the Amorites.

Immediately above the hearths of the Amorites Middle Bronze II pottery was found in fairly large quantities, followed almost immediately below the present surface by smaller amounts of unmistakable Late Bronze pottery including fragments of Cypriote base-ring ware. The latter again seem to have been discards on an ancient refuse dump, as no traces of occupation came to light.

In the upper sounding Middle Iron sherds were found almost immediately below the surface, including some strainer spouts and fragments of square-shouldered decanters similar to those common in Palestine in the same period. Part of a horseshoe-shaped or perhaps a circular structure was exposed, built of massive, well cut, roughly dressed stones, which may perhaps have been a *migdol*, or tower. Below this level Early Iron painted sherds, which were common in Phoenicia at the time, were found in small quantities, side by side with types like those found in the Early Iron Age level at Hama. Among these were discovered some bronze arrowheads and two iron daggers, one with bronze rivets.

In the same level many terra-cotta fireplaces or ovens, cylindrical in form,



Early Iron Age wall and terra-cotta oven; in the background is the west side of a Middle Iron Age tower.

were exposed, and crude, unpretentious stone walls built immediately over a thick layer of ash (see figure). The layer of ash seems to spread over the greater part of the site and may well be connected with the raids and invasion of the Habiru and the Sa-Gaz during the fourteenth century B.C. On the other hand, the occupation immediately above it may be related to the settlement of the Aramaeans in the area, late in the thirteenth and early in the twelfth century. Further exploration of the site will probably throw light on the relation between the Habiru invaders and the Aramaean settlers, and may uphold the theory which makes the Aramaeans the progeny of the indigenous Amorites and the newly arrived Habiru.

Expedition to Ecuador

The recent exploration of ancient sites in Ecuador has resulted in demonstrating that the prehistoric cultures of that region had important influences on cultural development in Peru and the Amazon Valley.

Field work was conducted for four months on the Río Napo in the eastern lowlands and in the Guayas Province on the coast of Ecuador by Clifford Evans, U. S. National Museum; Betty J. Meggers, Smithsonian Institution; and Emilio Estrada, director of the archaeological museum, Guayaquil, Ecuador.

Excavations on the Río Napo revealed large villages and a well developed ceramic art which included elaborate vessel forms and complex decoration made by incision, painting

and champlevé. This pottery has close resemblances to the pottery from the island of Marajó, located at the mouth of the Amazon. The Marajó culture is alien and seems out of place, and its origin has until now been unknown. The work of Evans and Meggers indicates that this culture originally came from the headwaters of the Amazonian tributaries in Ecuador and Colombia. This is the first time that such an extensive down-river migration in prehistoric times has been proved in South America. The movement probably took place a few hundred years before the arrival of the Spanish. When Orellana made his voyage down the Napo and the Amazon in the mid-sixteenth century, the sites along the Napo had already been abandoned, and he found no Indians living on that river within the area embraced by the present boundaries of Ecuador.

Investigations by Evans, Meggers and Estrada in the Guayas Province of coastal Ecuador have revealed the presence of two early cultures which show many similarities with the early cultures of Mexico and Peru. The older of these has been named the Valdivia culture. The Valdivia pottery shares with that of the earliest pottery-making cultures of Mesoamerica distinctive traits like broad-line and fine-line incision, excision, rocker stamping and high polishing of surfaces. A large number of pottery female figurines suggests religious practices. These nude figurines have elaborate hairdresses and sometimes the body is painted red in various designs. Pottery of a similar style has also been found in Peru, but it does not resemble that of early Mesoamerican cultures so closely as does the Valdivia culture. This suggests that the movement which distributed this early Formative period culture so widely in Mesoamerica and South America traveled from north to south. The Valdivia culture must therefore be at least as old as the similar culture in Peru, which has been dated by Carbon 14 tests between 1500 and 1000 B.C.

Following the Valdivia culture was another early culture with different features, but also closely resembling others in Mesoamerica and Peru. This so-called Chorrera culture has as characteristic features thin, highly polished red and black pottery with very fine incised lines and rocker stamping, and bottles with tapered spouts and whistle-

handles. These traits are shared with the Formative period cultures of Tlatilco in Mexico and Chavín and Cupisnique in Peru. As in the Valdivia culture, the Chorrera pottery more closely resembles the Mexican than the Peruvian expression of this widespread horizon, again indicating a movement from north to south. This culture is dated 1000-500 B.C.

The discovery of these two early Ecuadorian cultures is significant because it provides definite evidence of the north-south direction of movement in this early period. The investigations in Ecuador thus represent an important contribution to the solution of major problems in New World prehistory.

A Century of Scottish Archaeology

The Glasgow Archaeological Society, which was founded in December 1856, has arranged as part of its centenary celebration a program of lectures and excursions for the week of August 4-9, 1957. New discoveries made since the war have increased our knowledge of the Roman occupation of southern Scotland, especially the Clyde Valley; hence the theme of the program, "The Romans and Strathclyde," is most appropriate. The lectures will be given at Glasgow University. Topics include: Scotland before the Romans, the Roman frontier in Scotland, small towns of Roman Britain, Hadrian's Wall and the Antonine Wall, Castellum Veluniate and civilians on a Roman frontier, and the British kingdoms of southern Scotland and the Saxon invasion. Excursions are planned to nearby Iron Age sites, various points along the Antonine Wall, Roman forts and a Dark Age fort.

Guggenheim Awards

The fellowships announced by the Guggenheim Foundation for 1957-58 include the following grants to scholars in archaeology and allied fields:

DARRELL ARLYNN AMYX, University of California. Studies in Greek vase painting.

ARTHUR J. O. ANDERSON, Museum of New Mexico. Studies of Aztec accounts of Spanish settlement in the Americas.

YURY ARBATSKY, New York City. Historical studies of music and musical

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instruments, from pre-Hellenic times to the fall of Constantinople.

CURTIS DAHL, Wheaton College. A study of 19th century archaeological discoveries in relation to the cultural history of the West.

BENNO LANDSBERGER, Oriental Institute, University of Chicago. Studies of the languages and cultures of the ancient Middle East.

PAUL LACHLAN MACKENDRICK, University of Wisconsin. Studies of Roman colonization in the Republican period.

JOHN HOWLAND ROWE, University of California. Studies of Inca leadership during Spanish Colonial rule.

BENJAMIN ROWLAND, JR., Harvard University. Studies of Greek, Roman and early Christian antiques in Italian collections, in their relation to classic art in India.

PAULINE SIMMONS, Metropolitan Museum of Art. Studies of 7th and 8th century Chinese and Japanese textiles.

RENATA VON SCHELIHA, New Haven, Connecticut. Studies of the musical and poetical contests of the Greeks.

Forged North Syrian Seals

During the past few years small numbers of cylinder seals produced by a forger in Syria have been brought to the United States. Recently, however, there appeared a collection of two hundred and fifty pieces, said to have been found in three tombs near Latakia but obviously carved by the same man. Although the collection is at present in the Near East, it seems likely that efforts will be made to dispose of it in the United States.

These forgeries are more difficult to recognize than others because the seal cutter has developed a crude but consistent style. Examples are given here from the collection of Dr. Leland C. Wyman of Jamaica Plain, Massachusetts. Dr. Wyman purchased them in Aleppo in the summer of 1954, and has kindly permitted the reproduction of impressions.

The seals are all made of soft steatite, black or green in color. The edges of the engraving never show any wear, which is some indication of recent manufacture, although occasionally ancient cylinder seals are also found in pristine condition. The seals range from a height of 22 mm. and a diameter of 8 mm. to a height of 56 mm. and a diameter of 12 mm., but the



majority are between 30 and 40 mm. with diameter between 12 and 14 mm.

The subject most common on the cylinders is a procession of tall, oval-headed, wide-shouldered figures (Nos. 1-3), either men or women, rarely both on one seal. The figures are of equal height, or sometimes one is larger than the others, who are then shown in an upper register with the space below filled by long-bodied animals with upward-curving tails (No. 1). The men are nude except for two horizontal lines at the waist, indicating a belt; one of them often holds a spear with double point and a globe at one end. The women have skirts indicated by two curving lines which flare out below (No. 2). The tree most often found has branches indicated by opposing curved lines (No. 3) often ending in small globes. A favorite filler is a scorpion (No. 1); others are birds (No. 4), fishes, frogs and drillings in a cluster of three (No. 1).

Not illustrated here are the forger's recent, more ambitious ventures, scenes which include animals with long-curving horns and a bird with body indicated by one rather graceful line and wings with ladder design—as well as inscriptions. A few of these seals were copied from the well known cylinder of Matrunna, daughter of king Aplahanda of Carchemish, now in the Moore collection but found at Ras Shamra in Syria in 1928, before Prof. C. F. A. Schaeffer's excavations at the site (cf. G. A. Eisen, *Ancient Oriental Cylinders* . . . [Chicago 1940] page 58, s.v. 130). Latakia, the site where the collection is said to have been found, is close to Ras Shamra. A number of the forgeries indeed recall cylinders exca-

vated by Prof. Schaeffer and published in *Syria* XII (1931) Plate 3, No. 1. Probably the forger was able to lay his hands on other seals found at Ras Shamra, perhaps during the period when M. Schaeffer's work was interrupted during and after the Second World War.

In addition to cylinder seals, the forger has also produced stamp seals, most frequently of the North Syrian ledge-handle type (No. 5) but also in the shape of a truncated pyramid (No. 6) or of a cone with rounded top (No. 7). The most successful designs show a horned animal, with fillers nicely fitted into the space. Usually the design is enclosed in a fine line (No. 4).

It is hoped that this brief description will prevent these forgeries from becoming an accepted "crude North Syrian group" in private and public collections of the United States and Europe.

EDITH PORADA

Pacific Science Congress

Archaeology will play a large part in the sessions of the Ninth Pacific Science Congress, which is scheduled to take place in Bangkok, Thailand, from November 18th to December 9th, 1957. Professor Phya Anumarn Rajdhon of the Royal Institute in Bangkok is Organizing Chairman of the Anthropology sessions. Anyone wishing to present a paper at the Congress must see that an abstract (not more than 400 words), accompanied by the paper in its final form, is in his hands by August first.

Members of the American Branch of the Far-Eastern Prehistory Association

who expect to read papers at the Congress are also requested to send the titles to the Secretary, Mr. W. G. Solheim II (Dept. of Anthropology, University of Arizona, Tucson, Arizona) as soon as possible. Mr. Solheim and Prof. Schuyler Cammann of the University of Pennsylvania have been appointed delegates to the Congress, representing the American Branch of the FEPA. Dr. Richard K. Beardsley of the University of Michigan is now president of the American Branch, Prof. E. W. Gifford of the University of California having declined the office.

Olmec Sculpture Restored

Among the treasures of the Cleveland Museum of Art is a stone torso from Mexico, belonging to the Olmec culture, which represents a man seated on his haunches. This excellent piece of work, acquired by the Museum in 1939, was featured in our article, "Art and Archaeology in the Cleveland Museum of Art," (ARCHAEOLOGY 6 [1953] 201). The figure then lacked the head, the left shoulder and arm, and a large portion of the left leg, including the knee.

Recently almost unbelievable luck combined with extraordinary visual memory on the part of a friend of the Museum has resulted in the restoration of a portion of the figure including the left knee and the hand resting upon it. We quote from a letter printed in the



The Mexican torso as first acquired.



The torso with the new fragment added.

Museum's *Bulletin* for March 1957:

"When we were in Mexico, we went one evening to the more than modest home of an Indian woman in Iguala (west of Taxco [in Guerrero province]). . . . She often has a barrow at the market in Iguala where she sells boxes of archaeological bits picked up in the fields by other Indians.

"The night we went to see her with a Mexican friend, she had nothing at all of interest . . . but as the two men were leaving her son brought out another box of junk. My husband at once saw this knee and the Mexican bought it from the woman. My husband rec-

ognized it as probably the missing piece from that . . . figure in the Cleveland Museum. I thought he was mad. . . . However, the master's eye was certainly true."

Mr. William M. Milliken, Director of the Museum, adds: "One can imagine what a delight it was when the knee with the hand upon it actually proved to be the missing part of the Cleveland statue. The finding of this fragment in Guerrero, interesting as corroborative data, also indicates the probability that the statue, known for at least two decades, in all likelihood may have come originally from this region."

*Highlights of
the Autumn issue of*

ARCHAEOLOGY

ART OF THE LOWER COLUMBIA VALLEY

by B. Robert Butler

BRONZE AGE BURIAL RITUAL IN THE LOW COUNTRIES

by Sigfried J. DeLaet

POTTERY FROM PERICLEAN ATHENS

by Cedric G. Boulter

THE GREAT PALACE OF THE BYZANTINE EMPERORS

by D. Talbot Rice

PHAISTOS—SECOND FIDDLE TO KNOSSOS?

by J. Walter Graham

Japanese Expedition to Iraq

A well equipped expedition formed by the University of Tokyo arrived at Baghdad early in November 1956 and began excavations at Telul eth-Thalathat, an ancient site situated a few kilometers from Tell Afar in the western plains of Mosul, which was recommended by the Directorate General of Antiquities to Professor Namio Egami on his first visit to Iraq in 1954. The excavation was inaugurated November 8th by His Imperial Highness Prince Mikasa.

The expedition staff included the following:

Namio Egami, Professor, University of Tokyo, archaeologist, Director of the expedition.

Kikuo Atarashi, Professor, Tokyo University of Arts, art historian, Assistant Director.

Fuyuji Takai, Professor, University of Tokyo, palaeontologist, Assistant Director.

Jiro Ikeda, Assistant Professor, Niigata University, anthropologist.

Iwao Kobori, Lecturer, University of Tokyo, human geographer.

Hisahiko Sono, Lecturer, University of Tokyo, archaeologist.

Tatsuo Sato, Assistant, University of Tokyo, archaeologist.

Shinji Fukui, Assistant, University of Tokyo, art historian.

Kiyoharu Horiuchi, Assistant, University of Tokyo, architectural historian.

Seiichi Masuda, National Museum of Tokyo, archaeologist.

Yutaka Sakaguchi, University of Tokyo, geologist and physical geographer.

Shigeru Kuwano and Seiji Nakamura, photographers.

The site comprises three mounds, which give the place its name, Eth-Thalathat, "the three." In its first cam-

A HELLENIST WANDERS

The names we meet in Greek are not as hard to understand as these Eastern names like Prrrp and Pnrt and Rs and Arnuandas; I'd rather have to clean the grate and carry out the hot ash. Then deal with Pssst and Wrk and Nsy and Bndbr and Maduwattash.

DAPHNE HEREWARD

paign the expedition did not touch any of the mounds but concentrated excavations on a hillock forming the southern extremity of the site. Two trial trenches dug there revealed features of the prehistoric Uruk culture (around 3500 B.C.) and some pottery surviving from earlier periods. Among the important discoveries was a building of sun-dried brick, believed to be of the Uruk period. Sling balls found in its two rooms may indicate that the building had a military function.

After a winter recess the expedition resumed work in March 1957. We hope to report further results of the excavations in a later issue.

Exhibition of Ancient Glass

The Corning Museum of Glass will present as its major summer exhibition the Ray Winfield Smith Collection of ancient glass, the greatest private collection of the kind in existence. The exhibition, including more than seven hundred objects, will cover the period from 1500 B.C. to A.D. 1200.

In order to accommodate Mr. Smith's collection, The Corning Museum will remove its own collections of ancient glass and devote the entire east gallery to one hundred great glass objects arranged chronologically, illustrating twenty-two area-periods of ancient glass. In addition to the east gallery, the special exhibition area has been remodeled to provide a setting for the remainder of Mr. Smith's collection. Early glassmaking techniques will be described and illustrated, thus forming a graphic history of glass manufacturing techniques in the ancient world.

Mr. Smith's collection is internationally recognized as being the most complete ever formed. It includes the largest group of objects with Early

Christian symbols in private possession and the most representative group of Islamic cut vessels ever assembled. The collection is also rich in unique masterpieces such as the Paris plate (see ARCHAEOLOGY 9 [1956] 3-7), on which is depicted the well known subject of Paris awarding the beauty prize to Venus, the goddess of love. Another important object is the Daphne vase, probably made in Antioch, Syria, in the third century, and once in the collection of J. Pierpont Morgan.

This exhibition offers an unequalled opportunity to see the full scope of the first 2700 years of glassmaking.

The exhibition will last until September 15, 1957. The Corning Museum of Glass is located at the Corning Glass Center, Corning, New York, and is open every day except Monday, from 9:30 a.m. to 5:00 p.m.

Discovery in Iraq

In 1953 Shanidar Cave, located in the Zagros Mountains of northern Iraq, was the scene of the discovery of a baby's skeleton, the first Palaeolithic skeleton to be found in that country. This unique find was made by Dr. Ralph Solecki of the Smithsonian Institution, twenty-six feet below the present ground level of the cave. A recent study of the teeth of the Shanidar child indicates that it belongs to a new form of Mousterian or Upper Pleistocene man.

Now once again digging in the same cave, Dr. Solecki reports the discovery of an adult skeleton at a higher level—fourteen and one half feet below the surface. The layer in which it was found is known to be more than thirty-four thousand years old, but the type of man it represents is not yet known.

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REVIEWS OF RECENT BOOKS

DISCOVERING BURIED WORLDS, by ANDRÉ PARROT. Translated by EDWIN HUDSON. 126 pages, 30 plates, 5 maps. Philosophical Library, New York 1955 \$3.75

THE FLOOD AND NOAH'S ARK, by ANDRÉ PARROT. Translated by EDWIN HUDSON. 76 pages, 7 figures, 4 plates. Philosophical Library, New York 1955 (Studies in Biblical Archaeology, No. 1) \$2.75

THE TOWER OF BABEL, by ANDRÉ PARROT. Translated by EDWIN HUDSON. 75 pages, frontispiece, 10 figures, 3 plates. Philosophical Library, New York 1955 (Studies in Biblical Archaeology, No. 2) \$2.75

These are the first three small volumes in a popular series on biblical archaeology by the French archaeologist who is well known for his work at Mari on the upper Euphrates. They are all excellent books, models of their type, which deserve an excellent sale in this country. In the original French edition eight of the books have already ap-

peared. Besides the three listed above, five others deal with Nineveh and the Old Testament, Golgotha and the Holy Sepulcher, the Journeys of St. Paul, the Temple of Jerusalem, and Samaria, the capital of the Kingdom of Israel. All are written by Parrot except the one on the Pauline journeys, the author of which is Henri Metzger. The books are being put into English and published in a series, called *Studies in Biblical Archaeology*, by the Student Christian Movement Press in London. The Philosophical Library herewith offers the first three of the English edition to American readers. In doing so, however, it has priced them out of sight. Much as I admire and recommend the books, I cannot advise anyone to purchase them at the price here asked. In England they cost \$1.05 each plus postage!

The first book is an introduction to archaeological work in Western Asia: how the archaeologist goes about his work in the field, the story of the archaeologists, the story of five thousand years

of civilization from the first villages to the Christian era, and the relation of this story to biblical history. I suppose that one must pardon the author's view, fairly common among those accustomed to dig at wealthy sites outside Palestine, that, except for the Dead Sea Scrolls, digging in Palestine has been "comparatively unfruitful" (page 109). In a sense, I suppose that is true. Museum objects are rare and so is monumental architecture of a spectacular type. Yet this has brought its compensations. Care in stratigraphical techniques, in typology and ceramic chronology, and satisfaction with limited objectives—these have meant that we are able to describe the archaeological history of the country in greater detail through most periods than is true for any other country in Western Asia and Africa.

The books dealing with the Tower of Babel and the Flood take the opportunity to present an excellent summary of the story of the ziggurat, in particular the Etemenanki of Babylon, and the literary and stratigraphical evidence for a flood or floods in Mesopotamia, with a short appended treatment of the Ark. The latter concludes with the story of modern attempts to find the Ark simply by the will to believe!

G. ERNEST WRIGHT
McCormick Theological Seminary

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"This book is a valuable contribution in this hitherto little explored field. Its provocative and challenging subject has never before been presented as comprehensively in one volume."

—Alfred Salmony,
Professor of
Oriental Art, New
York University

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THE SCULPTURE OF THE HELLENISTIC AGE, by MARGARET BIEBER. xii, 232 pages, 714 figures. Columbia University Press, New York 1955 \$17.50

The progress of archaeology into more specialized fields has left few modern, comprehensive yet scientific histories of later Greek and Roman art written in English. In Roman archaeology our best general histories, those of the late Eugenie Strong, were written thirty or more years ago. Miss Bieber has added another laurel to her

long and distinguished career by producing a monumental volume in which all major and many minor masterpieces of Hellenistic art are discussed and illustrated with the extensive documentation that makes her work invaluable as a text, a reference and a springboard for future research.

Besides twelve chapters which present Hellenistic sculpture from its antecedents in the fourth century B.C., through the traditional arrangement of geographical "schools" and roccoco trends in the third and second centuries B.C., and into the classicism of the century before Augustus, the book contains a Chronology of Historical Facts and Dated Works of Art, an extensive Selected Bibliography, a full Index, and a List of Plates in which titles by subject groupings and all photograph sources are given. These features are mentioned because they serve to make the book a veritable encyclopedia of scholarship in this field during the century since Johann Gustav Droysen coined (1833) the word "Hellenistic," meaning late Greek.

In a short review of such an important work it is perhaps petty to comment on the quality and labeling of the photographs. If every scholar withheld his publishable material until better photographs became available, a book such as Miss Bieber's would be subject to even longer delays in appearing. However, even the casual critic will be struck by the superiority of many of the illustrations and the inferior, dated quality of others. For example, Figures 54, 56 and 57 show the Fogg Art Museum Meleager in the old Hunt Hall setting rather than in the present building, constructed nearly thirty years ago. It seems a shame that Replica C (Bulle) of the so-called Pothos of Skopas, with its alien head, appears as Figure 62, rather than Replica A, also in the Uffizi Gallery, or Replica D, discovered just before the war in Rome, in the Via Cavour. The Vatican-Uffizi-Duncombe Park mastiff (Figure 660) is hardly a "bulldog."

Miss Bieber's other writings of recent years have revealed her great interest in the treasures of American museums, especially the smaller Classical collections (Cleveland, Princeton, Toledo, etc.), in relation to the better known show-pieces of Europe. This interest is manifest in the number of American examples which are included

in her new book. American collections continue to increase their holdings of major masterpieces in the Hellenistic field. The heretofore conjectured head of Achilles in the Achilles and Penthesilea group, reconstructed by Giuseppe Lugli from scattered fragments (pages 79f.) is probably represented by a head which passed recently from London to the J. Paul Getty Museum in Malibu, California. The head suits Lugli's reconstruction admirably. The Getty Museum has also acquired a fine though headless replica of the so-called Trophos in Florence, a standing woman in a pose which led Arthur Milchhöfer to include her at the left of his reconstruction of the celebrated Niobid groups in Florence and elsewhere (Bieber, Figure 263). The Metropolitan Museum now displays the handsome and somewhat enigmatic bronze rider in elephant-skin cap and cloak (Figure 298) suggested as Demetrios of Bactria but perhaps representing Alexander the Great as he appears on coins struck by Ptolemy Soter, who ruled Egypt in the name of Alexander's son towards the end of the fourth century B.C.

CORNELIUS VERMEULE
Bryn Mawr College

FURNITURE IN ROMAN BRITAIN, by JOAN LIVERSIDGE. Foreword by J. M. C. TOYNBEE. viii, 76 pages, 5 figures, 69 plates. Alec Tiranti, London 1955 (Chapters in Art, Vol. 27) 10s.6d.

This small, concise book on a specialized subject by a recognized authority fills a need. Using all available evidence, well illustrated and furnished with notes, it recreates Roman interiors.

Owing to geographical and chronological circumstances, British furniture tended toward those Roman types least obviously of Greek derivation. Only a few of them can be mentioned here. Couches preferably were low with high closed back, like sofas, and the British preference was for curved ends. These couches had resilient seats. The commonest chair had a rounded back in one with the sides, heavy low base and sometimes four little feet. This design was frequently executed in wicker, and wicker chairs were preferred by women. Of iron folding stools, the author accepts two from Britain, both having a curious interrupted upper front bar (cf. others from Bulgaria: *Bulletin de l'Institut Archéologique Bulgare* VII [1932-33] 418, 421) but doubts, at least in its

present form, a richly decorated stool having both an interrupted bar and three jointed horizontal bars (for the decoration and some details of construction, compare the fragments in *Fasti Archaeologici* IV [1949] 564 and *American Journal of Archaeology* 55 [1951] 185, plate 13 D). Folding tripods are indicated. Tables with animal foreparts as legs, a common imperial type, are distinctly British if made of Kimmeridge shale.

Hangings, cushions, mattresses and pillows enhanced the comfort and beauty of the homes, which were also equipped with candelabra, chests, footstools and other amenities. It is a rich life that has skilfully been delineated with the help of these *disiecta membra*.

DOROTHY KENT HILL
The Walters Art Gallery

PAA-KO, Archaeological Chronicle of an Indian Village in North Central New Mexico, Parts I-V, by MARJORIE F. LAMBERT. The Physical Type of the Paa-ko Population, Part VI, by SPENCER L. ROGERS. Parts I-V: xviii, 183 pages, 54 figures, 39 plates, 13 tables. Part VI: iii, 48 pages, 65 illustrations, 32 tables. School of American Research, Santa Fe, New Mexico 1954 (Monograph 19) Parts I-V \$6.00, Part VI \$3.00

Paa-ko lies thirty-five miles northeast of Albuquerque, New Mexico, on the edge of the Galisteo Basin. The setting is spectacular. The Sandia mountains rise abruptly to the west of the site, and scattered rolling hills blend into the plains to the east. The region is fairly thickly covered with piñon and scrub oak, which grade to the west into dense pine-covered slopes of the Sandia mountains.

One of the main objectives of the excavation was to preserve the remains of the village as a museum *in situ*. The portions at present uncovered are almost entirely obliterated because of lack of care, as this objective of the program never materialized.

Paa-ko has long been popular with excavators. N. C. Nelson was the first to excavate, in 1914-15. A combined project of the Museum of New Mexico, the School of American Research and the University of New Mexico was carried out in 1935-37. It is with this excavation that the present report deals. Lastly, the University of New Mexico did further work in 1949-50.

The pueblo is made up of two major

IMPORTANT

- Pre-Columbian
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- South Seas
- Northwest Coast Indian

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SCULPTURES

groups of communal rooms, on the north and south. This report deals with only the northern group; it includes data from over two hundred excavated rooms ranging from prehistoric through historic times.

The site is divided into two periods. The prehistoric began about the end of A.D. 1200 and ended by 1425. The historic reoccupation began before 1525 and the site was abandoned by 1672. Special emphasis is placed on the use of Spanish documents in throwing light on the occupancy of the site.

The report is divided into five sections: the setting (containing an extensive discussion of the historical background), the architecture (with a detailed classification of the cell-like rooms, ceremonial chambers and other features), the material culture (an intensive study of the ceramics and, to a lesser degree, stone, bone, shell and metals of European culture), mortuary practices, and discussion.

Part Six treats of the physical type of the Paa-ko population. Observations on the health of the group indicate that 82.6 per cent of the series studied were afflicted with a bone condition, osteo-arthritis. Bad teeth conditions occurred in 75.8 per cent. The author suggests that this may have been due in large part to the presence of metate stone dust in corn meal, which caused the teeth to be ground down an unusual amount.

Such publications add measurably to the history of the Indians of the Middle Rio Grande region. Despite the numerous sites, many thoroughly "pot-hunted," in the important Galisteo region, few reports have been forthcoming.

HERBERT W. DICK
Trinidad State Junior College

LIVIA'S GARDEN ROOM AT PRIMA PORTA, by MABEL M. GABRIEL. viii, 56 pages, 7 figures, 36 plates. New York University Press, New York 1955 \$12.00

In an earlier work, *Masters of Campanian Painting*, Mabel M. Gabriel revealed an artistic and scholarly interest in the Pompeian painters. Her latest book presents a minutely accurate and photographically unrivaled account of the paintings from the Garden Room of Livia's villa at Prima Porta (now preserved in the Museo Nazionale at Naples). The author clearly indicates her admiration of this "fairy garden where . . . plants, flowers, and birds live together at all seasons in joyful harmony," but she is less subjective in her comments (and less liable to adverse criticism) than in her appraisal of the "Campanian masters."

The situation, construction and date of the villa (30-25 B.C.) are briefly discussed; a sketch plan of its location would have been useful. Relationship of the "open," "continuous" decoration of the underground room to similar Second Style paintings is clear, but there is one unique feature—the absence of architectural division between the panels. This has usually suggested that we have a simulated view from some grotto; Gabriel prefers to think of a pergola with thatched roof. Examination of composition, form, perspective (marked by surprisingly good aerial effects), color, the characteristically inconsistent lighting and details leads to a distinction of individual painters—a master who painted the south end-wall and the center of the north end-wall, and pupils directed by him; the birds were the work of a specialist who was apparently an ornithologist.

A detailed description of the paintings (Chapter V) is followed by a catalogue

of the birds found in them. The author has been able to identify almost all of these by painstaking research; and while there is no separate catalogue of the bushes, trees and fruits it is clear that these were studied with the same care. The plates would form a valuable book in themselves.

One criticism seems in order. Perhaps under the spell of rooms like the "Hall of Aphrodite" from Boscoreale and the "Dionysiac" room in the Villa dei Misteri, the author feels that the garden paintings may represent a sacred grove. Summer heat, the desire for space so characteristic of the Second Style and yearning for the gardens above ground are surely explanation enough.

CHRISTOPHER M. DAWSON
Yale University

PREHISTORY AND PLEISTOCENE GEOLOGY IN CYRENAICAN LIBYA: A Record of Two Seasons' Geological and Archaeological Field-work in the Gebel Akhdar Hills, With a Summary of Prehistoric Finds from Neighbouring Territories, by C. B. M. McBURNEY and R. W. HEY. xii, 308 pages, 40 figures, 16 plates. Cambridge University Press, New York 1955 \$10.00

Half this book concerns joint geological and archaeological pioneering field work along one 150-mile stretch of coast. A whole staircase of ancient marine terraces was studied, and the lowest (six-meter) assigned to the last interglacial. Following this were (1) high wadi tufas of a damp, low sea-level phase and (2) younger gravels and fossil dunes of an even lower sea-level and dry frosty phase. These are tentatively dated Würm I and II, respectively. Middle Palaeolithic flake industries were traced in and on all these formations. A particularly rewarding evolved Levalloiso-Moustierian workshop site with fauna was found in the tufas, which were also stuffed with floral remains—an exciting event in the North African Pleistocene. Hand-axes and tanged Aterian tools were found only in rare unrelated surface sites. Vivid impressions of the ecology and climate are squeezed out of the geomorphology, lithology, fauna and flora. These first eleven chapters, clearly written and adequately illustrated, summarize a fine collaboration and are the most effective in the book.

Remaining chapters bring together tremendously valuable data, virtually all that is known for Libya, and stim-

ulate much speculation. However, they have too ambitious a format for the present material: one is deluded into expecting advanced syntheses when, in fact, one receives a series of short reports on scattered or inconclusive data.

Chapters XII and XIII, on caves still under investigation, describe important stratigraphic sequences. At Hagfet et-Tera Levalloiso-Mousterian (with indication of Aterian and a very moot transitional phase) underlies two blade industries, the one an Oranian facies, the other perhaps ancestral to it. This sequence needs fuller illustration and clarification of arguments about conflicting findings. Hagfet ed-Dabba, well presented, has five horizons of a Capsian-like blade industry in developmental sequence involving east Mediterranean influence. Hauch Fteah, un-illustrated and treated mostly in a footnote, proves that in this region this Capsian tradition precedes the Oranian. Carbon 14 dates on these and a Neolithic horizon provide a time scale.

Chapter XIV, on the sketchy Palaeolithic finds of the two provinces flanking Cyrenaica, gives evidence of the

same industries but no proven sequences. In Sirtica are dunes with a distinctive pre-Neolithic geometric microlith and bladelet industry, not here illustrated, for which the author proposes the name "Sirtican." In Tripolitania Middle Palaeolithic and Aterian are associated with fluvial deposits, and a late or post-Capsian midden is sampled. Only the Aterian is illustrated.

Chapter XV treats North Libyan Neolithic surface sites. To give these meaning the author digresses to distant Egypt. There are sharp typological contrasts east and west of Sirtica, as if that coastal region had been a barrier and not a highway.

Hypotheses include over-all similarities during the Lower and Middle Palaeolithic and increasingly specialized industries as conditions localized circulation in Upper Palaeolithic and later times. The volume will certainly be a guide to this *terra incognita* for some time to come, providing a framework of natural and cultural events to which later finds may be related.

BRUCE HOWE

Peabody Museum
Harvard University

THE ANCIENT MAYA, by SYLVANUS G. MORLEY. Third Edition, revised by GEORGE W. BRAINERD. x, 494 pages, 57 figures, 102 plates, 10 tables. Stanford University Press, Stanford 1956 \$10.00

In its first two editions this ambitious volume proved successful beyond all expectations, in spite of its idiosyncrasies and prolixity. A revised edition is thus extremely welcome, particularly since it is the work of another Maya scholar who was equally well versed in things Maya and had a somewhat broader perspective.

Certain changes from the previous editions are at once noticeable: fewer pages make the book more manageable, and the oversize charts and drawings are gone or reduced to page size. But nearly all the original illustrations remain, with excellent additions such as the Palenque tomb and the Bonampak murals. Reduction of the text has been accomplished by dropping a few sections and by skilful editing. But the style of presentation is still basically Morley's, with only four chapters drastically revised: "The Old Em-

"Exciting information"—

N.Y. TIMES BOOK REVIEW

The Mountains of Pharaoh

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pire" and "The New Empire" (now "The Classic Stage" and "The Postclassic Stage"), "Ceramics" and the chapter of appraisal at the end. In each chapter Brainerd has presented some of the same facts and ideas in more nearly current terms, or dropped details that now seem of dubious value. With these changes a more satisfactory summary of Maya archaeology is offered, although departing less from Morley's version than might have been expected.

Even with skilful condensation, however, the result is not entirely satisfactory. I suspect that Brainerd could have written an even better book if he had not been constrained within the strait-jacket of the original scheme. Details of sculpture, architecture, ceramics and so on are completely separated from the chapters on the Classic and Postclassic, where they would have more meaning and could be related to each other to reflect more truly the total culture of an era. Cross-references and a few general comments hardly compensate for this fragmentary approach. More importantly, the Preclassic or Formative is barely mentioned, since the chapter on "The Origins of the Maya Civilization" keeps Morley's emphasis on dated monuments as the key to Maya beginnings. This means that the whole problem of relationships with other important Mesoamerican centers of development and the fascinating question of connections with South America on the Formative level cannot be discussed at all.

The final chapter, "An Appraisal of the Maya Civilization," is the work of Brainerd's editorial assistant, Betty Bell, since his untimely death prevented his completing it. Nevertheless it is based on Brainerd's ideas, such as the "enigma" of Maya civilization, which fails to fit easily into current schemes of cultural evolution or definitions of "civilization." In this chapter Brainerd makes a complete break with Morley, eliminating his earlier appraisal and speaking for himself. The result is the most stimulating chapter in the book, though one that requires what goes before to be fully effective.

As a whole, this volume provides both the thoughtful reader and the casual skimmer with a wealth of detail on aspects of Maya culture. It supplements in handsome fashion J. E. S. Thompson's thoughtful and eloquent *The Rise and Fall of Maya Civilization*

and Brainerd's own brief but penetrating *The Maya Civilization*. While we must regret that Brainerd did not live to write a full study of his own on the subject of Maya civilization, we can be grateful that he brought his talents to the exacting task of giving us the best of Morley's book in a form that is more compact, is factually improved, and is even more readable.

RICHARD B. WOODBURY
Columbia University

THE MIDLAND DISCOVERY: a Report on the Pleistocene Human Remains from Midland, Texas, by FRED WENDORF, ALEX D. KRIEGER, and CLAUDE C. ALBRITTON. With a Description of the Skull, by T. D. STEWART. viii, 139 pages, 36 illustrations, 7 tables. University of Texas Press, Austin 1955 \$3.50

This well organized report on another "early man" find in the New World is concerned mainly with establishing the geological context within which the remains of a young woman were found. Hence the bulk of it is devoted to an analysis of the sand dunes of the Scharbauer Site. We have here an excellent example of interdisciplinary cooperation in archaeological research: a most imposing battery of experts analyzed the geological, palaeontological, cultural and human materials.

According to the authors, the human remains, primarily an incomplete calvarium, were deposited in the dunes at the close of a humid period preceding the last major advance of the Wisconsin glaciation. They are believed to be superimposed by a series of sand levels containing Folsom materials and are therefore argued as being older than the radiocarbon date of 9883 ± 350 years given that culture at Lubbock, Texas. The radiocarbon dates of fossil animal bones from the Scharbauer Site, from sand levels at and below the human remains, are more recent— 7100 ± 1000 years and 8670 ± 600 years respectively. Chemical analyses of human and animal bones from the site indicate that they have been subjected to the same environmental conditions, layer by layer, and therefore that the animal bones from the gray sand (in which the human remains lay) and from the white sand are respectively of the same date or older than the human remains. The authors do not choose to accept these radiocarbon dates (though

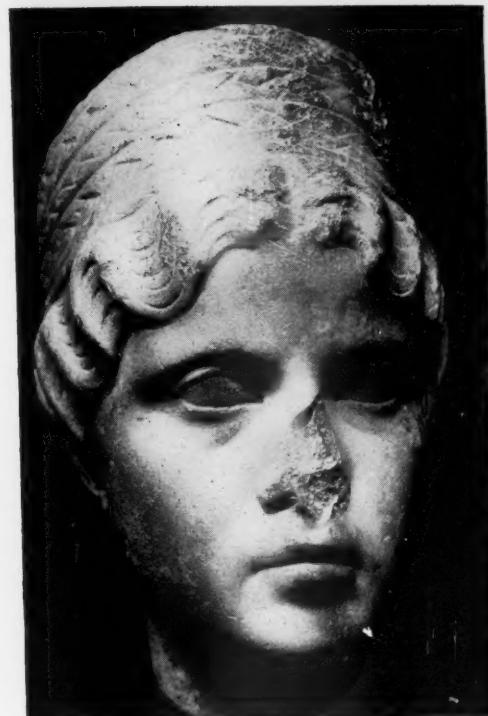
they do rely on the Folsom date from Lubbock), preferring to give greater weight to palaeontological and geological evidence. Associated with the human remains were five projectile points, two of them complete, of a form referred to as "unfluted Folsom." These are said to have been dropped, by wind erosion, from the upper surface of the Judkins sand, where other points of a Folsomoid character were found, down to the lower level of the human remains. It may be asked if this might not also have happened to the human bones. However, sand recovered from the inner auditory aperture of the human skull matches that of the level in which it was found; presumably it was deposited shortly after the individual's death.

To this reviewer's mind the report raises as many questions as it answers. If one accepts certain data the human remains are approximately ten thousand years of age and serve to illuminate an early horizon of which we already have glimmerings. If, on the other hand, one accepts the author's argument, the remains are perhaps twice this age and possibly the oldest known in the New World. Only further investigation will give the final answer.

ROBERT F. G. SPIER
University of Missouri

CATALOGUE OF GREEK SCULPTURES IN THE METROPOLITAN MUSEUM OF ART, NEW YORK, by GISELA M. A. RICHTER. xviii, 123 pages, 164 plates. Harvard University Press, Cambridge 1954 \$22.50

The modern style of museum exhibit, which seeks to woo the visitor's interest with a selection of carefully chosen, well displayed and meaningfully juxtaposed objects instead of opening up to him the full rich confusion of all the museum's treasures at once, places a particularly heavy obligation on the catalogue. It is only here that the working scholar as well as the art lover whose taste is not confined to what is fashionable or what the current curators like can learn what the museum has to offer him. Miss Richter, in her catalogue of the Greek sculptures in the Metropolitan Museum of Art, has met this challenge admirably. She has illustrated each piece fully. She has realized that a small, poor copy of a Hellenistic Aphrodite exists in just as many dimensions as a first-rate Classical original and requires as



Portrait of a girl. Early Antonine marble. Height 12 cm.



Etruscan Mars ca. 450 B.C. Bronze. Height 22 cm.

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many views to make it intelligible. Other valuable photographs illustrate the unrestored state of some sculptures and details of ancient attachments and repairs. This liberality in the plates has undoubtedly increased the price of the volume, but one cannot help feeling that the book is worth more than twice as much as what could have been produced for half the price.

The text is as worthy to serve as a model for future catalogues of sculpture as L. D. Caskey's Boston catalogue, to which Miss Richter acknowledges her debt. A great part of this richly representative collection and many of its most exciting pieces were acquired during the years of the author's own curatorship, and no one is so well qualified as she to give us the true sense of the importance of these works. The basic arrangement is chronological, with reasonable compromises. Copies are discussed in the periods of their originals. Special groups such as Archaic gravestones, Classical gravestones, and statues and statuettes of Aphrodite are treated separately and given short introductions which make the essential generalities concerning these categories readily accessible. The catalogue descriptions are concise but by no means lacking in meat. Since Miss Richter's policy is not to repeat things that she has discussed at length elsewhere, some of the most important pieces of sculpture, such as the early Attic kouros, have less interesting texts than some of the minor sculpture. I think that this is entirely justified. No

one who cares about the kouros would want to skip Miss Richter's earlier writings on it.

On Archaic gravestones Miss Richter adheres to her previous views but adds new details to the discussion, which is still far from exhausted. In the Classical period she offers no radical changes. The Lansdowne Amazon remains Polyclitan though the advocates of Kresilas (including this reviewer and the writer of the museum's present label) are constantly growing in numbers. For the later periods the catalogue reveals a wealth of minor sculptures and interesting fragments, many of which are not now exhibited. The copy of the Medici Aphrodite now so prominently displayed was acquired too late for inclusion in this book.

EVELYN B. HARRISON
Columbia University

THE TEMPLE OF NEHALENNIA AT DOMBURG,
by ADA HONDIUS-CRONE. 123 pages,
numerous plates. J. M. Meulenhoff,
Amsterdam 1955 15 guilders

One of the most famous archaeological discoveries ever made in the Netherlands occurred in 1647 when gales swept the dunes of the island of Walcheren and the sea laid bare the remains of a Gallo-Roman temple and a large number of altar stones. Many publications have been devoted to this discovery, but until now the most recent one was that which appeared in 1845. In the meantime many of the monuments have been destroyed or

badly damaged, and most of the older publications are hard to find and to consult. Therefore Mrs. Hondius-Crone's interesting new study on the subject is most welcome. She gives a short history of the finds, attempts a reconstruction of the site and of the temple, gives a good descriptive catalogue of the statues, altar stones, coins and pottery (here she publishes good photographs showing the present state of preservation compared with older reproductions which help us realize how the monuments looked when they were discovered). A final chapter is devoted to the goddess Nehalennia, her attributes and her cult. The book is very nicely printed, richly illustrated, and forms a very good contribution to our knowledge of the religion of Northern Gaul in Roman times.

S. J. DE LAET
University of Ghent

AN INTRODUCTORY HANDBOOK OF TEXAS ARCHEOLOGY, by DEE ANN SUHM and ALEX D. KRIEGER, with the collaboration of EDWARD B. JELKS. viii, 582 pages, 7 figures, 134 plates. Texas Archeological Society, Austin 1954 (Bulletin of the Texas Archeological Society, Volume 25) \$7.50

Tailor-made for the non-specialist and of major convenience to the specialist, this important work reduces to an orderly outline the great amount of research that has gone on in Texas during the past forty years. It is "introductory" not only in that it furnishes an introduction to the prehistory of an area, but also in that archaeological knowledge of much of Texas is still relatively rudimentary, and this book, by organizing the information now at hand, provides a point from which future research may proceed.

The authors have done a major service in applying the handbook concept to the archaeology of an entire area. The book is meant to be used as a reference, and its design reflects this intent on every page. The Introduction explains the methodology behind the arrangement of the book, discusses the concept of "type" in some detail, with suggestions to amateurs as to how they might analyze their collections, and examines the problem of chronological and cultural classification of prehistoric complexes in Texas. Part I, about half the book, is a summary of the archaeology of the seven regions within Texas in

terms of four stages: *Paleo-American* (the "Early Man" or "Paleo-Indian" period of other authors), *Archaic* (in the sense used in the eastern United States—a pre-pottery stage with both chipped and polished stone artifacts), *Neo-American* (the prehistoric pottery-making horizons) and *Historic*. For each region the archaeological complexes are defined and discussed stage by stage, and trait lists are given for each complex. Part II is a detailed treatment of seventy-five pottery types and seventy-nine projectile point types, arranged alphabetically. Each type is fully illustrated and is described according to a uniform outline, with a discussion of its chronological and cultural significance.

It is difficult to conceive of a more useful reference work for those interested, but not specializing, in the prehistory of this area. Its significance to the specialist is pointed up by the fact, inevitable when such a general work is presented, that some workers in the field have already taken exception to certain of its factual and interpretative statements—a sure indication that its function as a point of departure for

future work is being fulfilled. This volume ought to be used as a model for handbooks of archaeology in other areas. In any case, it is an essential reference work for every serious student of American prehistory.

E. MOTT DAVIS

University of Texas

CLAY FIGURINES OF THE AMERICAN SOUTHWEST, with a Description of the New Pillings Find in Northeastern Utah and a Comparison with Certain Other North American Figurines, by NOEL MORSS. 74 pages, 18 figures, 13 pages of line drawings, 2 maps. Peabody Museum, Cambridge 1954 (Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, Vol. 49, No. 1) \$3.50

During 1928 and 1929, while still an undergraduate at Harvard, Noel Morss investigated sites in the Fremont drainage of Utah. Although his information was obtained through survey and reconnaissance, and only limited excavation, he fully realized that he was dealing with a real cultural entity, a group of people whose way of life differed in many important respects

from that of the San Juan Anasazi. In his publication, *The Ancient Culture of the Fremont River in Utah* (Peabody Museum Papers, Vol. 12, No. 3, 1931), he provided a definition of the Fremont Culture that has stood the test of time. Later investigators have provided much additional information and have shown the need for the revision of some of Morss' original concepts, but, in general, his definition remains amazingly sound and comprehensive. His second major publication, *Clay Figurines of the American Southwest*, has provided additional proof that it was a very real loss to American archaeology when he chose another profession. This is a sound, scholarly and thoroughly professional job.

The first aim of this publication was to describe a remarkable group of figurines discovered by Clarence Pillings in a cave in Range Creek Canyon, Utah. The first portion of the book is devoted to this purpose. The figurines were of unbaked clay. They were decorated with applied clay elements that represented clothing, hair and ornaments. Some still exhibited red, buff and black paint, and Morss thinks

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it probable that all were originally painted. There were five male and six female figures. In Morss' opinion there may originally have been six pairs. He attributes the figurines to the Fremont Culture and dates them at about A.D. 1100.

The second portion of the book deals with the clay figurines of the Southwest. Morss recognizes two major traditions, a northern one to which are attributed Fremont and Basketmaker-Pueblo, and a southern one to which are assigned the Mogollon, Hohokam and Sinagua. Morss derives the Basketmaker II figurines from those of the southern tradition and the first Fremont forms from the Basketmaker III type. He believes that the later and more elaborate Fremont figurines, which have a strong Mexican aspect, may represent a northerly extension of the southern figurine tradition, stemming from the Hohokam in the eleventh century. On the basis of present evidence this is entirely reasonable. The reviewer feels, however, that further work might show a direct connection between the Fremont and the figurine tradition of Mexico at an earlier date.

The next section contains data pertaining to figurines outside the Southwest, including California, Texas, the Lower Mississippi, the Plains and Mexico. This is followed by a discussion of the function of the figurines. After citing examples taken from ethnological references and discussing various hypotheses, Morss concludes that, in general, they represent fertility symbols, not necessarily linked with agricultural increase cults. There is an excellent bibliography.

H. M. WORMINGTON
Denver Museum of Natural History

ANCIENT AMERICAN POTTERY, by G. H. S. BUSHNELL and ADRIAN DIGBY, xii, 51 pages, 84 plates including 4 in color, 2 maps. Pitman Publishing Corporation, New York 1955 \$8.50

This handsome book is the latest of twenty-two Faber Monographs on Pottery and Porcelain, and the first on any pottery outside of Europe or Asia. The authors are well known authorities on American archaeology, Dr. Bushnell at the Museum of Archaeology and Ethnology, Cambridge University, and Mr. Digby at the British Museum. Most of the over one hundred pottery vessels

and objects illustrated come from these two museums; twelve plates illustrating important regions and cultures not well represented there are from other sources. Dr. Bushnell wrote the sections on the Southwestern United States and South America, Mr. Digby that on Central America; both collaborated on the short Introduction.

The admirable and tasteful format and binding, the colored plates, and the quantity and quality of the half-tone plates (all the latter placed after the text), as well as the price, put the book out of the textbook class, to which the text would assign it. The latter is descriptive, straightforward, matter-of-fact and uninspired; in fact I missed the *belles lettres* quality that I have come to expect in even the scientific writings of Englishmen. It goes into considerable detail and is, on the whole, about the best and most thorough comprehensive treatment on the subject known to me. The Southwest United States is considered under the heads of Anasazi, Hohokam and Mogollon, South America under Central Andes, Ecuador and Colombia, and Northwest Argentina and Northern Chile. Central America embraces many sections, cultural, regional and typological.

As would be expected from these authors, the text is accurate, reliable and up to date. In addition to descriptions of the pottery, brief historical sketches of the makers are given. The specimens illustrated are on the whole excellent examples, but in a few instances better ones could be found in other museums.

Since the title of the book indicates a comprehensive treatment of the subject, one misses any mention of the Mississippi Valley, the Antilles, the important and interesting pottery of eastern Amazonia such as Marajo and Tapajoz, and certain cultures in the regions treated, such as Tairona in Colombia. The absence of several of these is noted and regretted in the Introduction. The index is good, but the bibliography is relatively short and general, with some important technological works omitted. I noted two slight errors. On page 22 the reference to Plate 39 should have been Plate 32. Plate 80, a Belen Diaguita urn, should have been referred to on page 46, not as a Santa Maria urn on page 45.

J. ALDEN MASON

IRAN FROM THE EARLIEST TIMES TO THE ISLAMIC CONQUEST, by R. GHIRSHMAN. 368 pages, 108 figures, 45 plates. Penguin Books, Baltimore 1955 \$1.00

This is a work of extraordinary value, representing the distillation of many years of residence, excavation and study in Iran—and in Iraq and Afghanistan as well. During this long period the author's scholarly interests have ranged widely so that the reader is not only informed of the most recent theories in many fields but will find a great deal of original interpretation. With so much new material brought to light in recent years the results appear, upon occasion, to compound confusion rather than to reduce complexities to digestible conclusions. For example, the author's discussion of Luristan bronzes and of their creators obscures rather than clarifies an understanding of their regional and stylistic sources.

Since the volume is certain to appeal to readers with interests beyond the geographical limits of ancient and modern Iran, it may be well to suggest ways in which successive editions may be made more useful to a widening audience. The present Index contains too few items in relation to the thousands of proper names, place names and descriptive terms included in the text. The Selected Bibliography is too brief to be of any value: it might be considerably expanded, particularly with regard to recent finds described in the text, such as the objects from Sakiz. The volume has a wealth of illustrations, reproduced on a slightly smaller scale than in the original French edition of 1951. The List of Plates provides information as to provenance or present location of the objects but the List of Text Figures gives no sources for these numerous line drawings nor is the artist named. The French edition names the artist as T. Ghirshman but fails to give the sources of these illustrations. Many appear to be copies of drawings by Herzfeld, de Morgan and others.

In recommending this volume to a wide audience the reviewer does not intend to suggest that it is to be devoured by an avid reader at a single session. Rather, it is a compendium of what is known about ancient Iran and includes material which will reward careful attention and which provides comprehensive coverage of long distant centuries.

DONALD N. WILBER
Princeton, New Jersey

BRIEF NOTICES

SEMINARS IN ARCHAEOLOGY: 1955. Organized and edited by ROBERT WAUCHOPE. x, 158 pages, 6 figures, 5 tables. Society for American Archaeology, Salt Lake City, Utah 1956 (Memoirs of the Society for American Archaeology, No. 11) \$1.50

Many papers formulated by the well-known American archaeologists Beardsley, Haury, Jennings, Lathrap, Meggers, Reed, Spaulding, Thompson and Willey, the results of four seminars held at various places in 1955 on the subjects: 1. An Archaeological Classification of Culture Contact Situations (Cambridge). 2. An Archaeological Approach to the Study of Cultural Stability (Ann Arbor). 3. The American Southwest: A Problem in Cultural Isolation (Santa Fe). 4. Functional and Evolutionary Implications of Community Patterning (Washington). Many other prominent scholars took part in the four seminars, and the Memoir summarizes the results of their discussions.

LATE MOGOLLON POTTERY TYPES OF THE RESERVE AREA, by JOHN B. RINALDO and ELAINE A. BLUHM. 39 pages, 34 figures. Chicago Natural History Museum, Chicago 1956 (Fieldiana: Anthropology, Vol. 36, No. 7) \$1.25

A thorough technological description of the dozen types of pottery distinguished in the excavations of the Chicago Natural History Museum during the last six years in the Reserve area of the San Francisco River in western New Mexico. Most of the types are unpainted corrugated, but a few are profusely decorated. Illustrations and sections of all types are shown, and all necessary information is given to place each type in its proper genetic and temporal niche. The time range is A.D. 950-1250.

MEZCALA: ANCIENT MEXICAN SCULPTURE, by MIGUEL COVARRUBIAS. 36 pages, 46 illustrations, 1 map. André Emmerich Gallery, New York 1956 \$1.50

Beautifully illustrated description of a fine and unusual collection of small stone human figures and masks from the Mexican State of Guerrero, with an account of its archaeological background and artistic quality and nature.

CURRENT RESEARCH ON THE MIDDLE EAST, 1956. Edited by WILLIAM SANDS and JOHN HARTLEY. 90 pages. The Middle East Institute, Washington 1957

This second issue of the annual survey of work in progress in Middle Eastern studies includes, in addition to current reports, information on projects previously reported and on final disposition and availability of completed works. The coverage has been somewhat extended by the inclusion of material from a few scholars in eastern Europe.

CORPUS NUMMORUM NUMIDIAE MAURETANIAEQUE, by JEAN MAZARD. 264 pages, numerous figures and plates, indexes. Gouvernement Général de l'Algérie, Direction de l'Intérieur et des Beaux-Arts, Antiquités et Monuments Historiques, Missions Archéologiques. Arts et Métiers Graphiques, Paris 1955

This valuable publication of the coins of Numidia and Mauretania makes available for the first time a complete survey of the numismatic evidence of these regions from the third century B.C. to the first A.D. The arrangement is easy to follow, the issues of the royal houses preceding those of the autonomous cities. Careful indexes include names, countermarks and Latin, Greek and Punic legends. The text figures, though sketchy, are helpful and the plates present the whole of the corpus of over six hundred and fifty coins.

ARCHAEOLOGICAL INVESTIGATIONS ON THE UNCOMPAGRE PLATEAU IN WEST CENTRAL COLORADO, by H. M. WORMINGTON and ROBERT H. LISTER. xiv, 129 pages, 69 figures. The Denver Museum of Natural History, Denver 1956 (Proceedings, No. 2)

A report on the excavation of rock shelters in 1937-39. The totality of artifacts composing the Uncompahgre Complex is outlined and described; it represents a hunting and food-gathering people, without pottery or domesticated plants. There are slight differences from several other complexes in the Great Basin area. Other excavations made in Glade Park and Little Park in 1951 and 1952 give a temporal range of ca. A.D. 350-1300; that for the Uncompahgre Complex is less certain but possibly much older.

THE CULTURE OF ANCIENT EGYPT, by JOHN A. WILSON. vi, 344 pages, 73 figures. University of Chicago Press, Chicago 1956 (Phoenix Books) \$1.50

This book, already reviewed in its original edition, entitled *The Burden of Egypt* (ARCHAEOLOGY 4 [1951] 124), is a useful and very readable treatment of cultural phases in the long history of Egypt. It is now published as an inexpensive paper-bound reprint. The *Chronology* (pages 319-320) has been brought up to date; on the other hand, every mistake in the captions of the illustrations has been faithfully repeated.

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CURRENT ANTHROPOLOGY. A Supplement to "Anthropology Today," edited by WILLIAM L. THOMAS, JR. xii, 377 pages. University of Chicago Press, Chicago 1956 \$5.00

Anthropology Today (1953) brought up to date, 1952-54. Outstanding articles by nineteen of the world's leading scholars in the field. A popular edition of Parts 1 to 3 of the Wenner-Gren Foundation's *Yearbook of Anthropology* 1955. Part 2 on "Man's Past: Environments, Relics, Ancestors," following Julian S. Huxley's guest editorial (Part 1), consists of ten important articles on archaeological subjects. Part 3 is non-archaeological.

ARCHAEOLOGICAL EVIDENCE OF PRE-SPANISH VISITS TO THE GALÁPAGOS ISLANDS, by THOR HEYERDAHL and ARNE SKJØLsvold. viii, 72 pages, 48 figures, 1 color plate, 2 tables. Society for American Archaeology, Salt Lake City, Utah 1956 (Memoirs of the Society for American Archaeology, No. 12) \$1.00

The interesting and important account of the 1953 Norwegian Expedition to these islands. They were previously considered as unknown in pre-Columbian days, but many potsherds and a few rude stone tools of identifiable late Peruvian and Ecuadorian archaeological types were found at coastal sites on four of the islands. The data suggest periodic short encampments rather than permanent habitations, but a developed navigation capable of making six-hundred-mile voyages.

GANDHARA SCULPTURE IN THE NATIONAL MUSEUM OF PAKISTAN. 43 pages, 34 illustrations. Department of Archaeology, Government of Pakistan, Karachi 1956 1 rupee

The Department of Archaeology of the Government of Pakistan has commemorated the 2500th anniversary of the birth of the Buddha by arranging in the National Museum at Karachi an exhibit of ninety-five pieces of Gandharan sculpture. The works shown come partly from the National Museum's own collection, partly from the Museums of Peshawar, Lahore and Taxila. The pamphlet provides a brief historical introduction, a selection of Buddhist texts in translation, illustrating the principal incidents of the Buddha's life, and a summary catalogue.

HIPPONÉ LA ROYALE. *Antique Hippo regius*, by ERWAN MAREC. 128 pages, 68 figures, 5 plans. Gouvernement Général de l'Algérie, Direction de l'Intérieur et des Beaux-Arts, Services des Antiquités, Algiers 1954

One of a series of attractive, well illustrated guides to ancient cities located within the boundaries of modern Algeria, this handy volume includes a summary of Hippo's history and describes its ruins, some recently excavated.

CULTURA DIAGUITA CHILENA Y CULTURA DE EL MOLLE, by F. L. CORNELY. 226 pages, numerous text illustrations. Editorial del Pacífico, Santiago de Chile 1956

This small paper-bound book, by the Director of the Museo Arqueológico of La Serena, Chile, is the last word—and one of the few words (See *ARCHAEOLOGY* 9 [1956] 200-205)—on two of the most important cultures in Chile. Both sections are revisions and expansions of earlier works published in restricted editions in scientific series. The two cultures are fully described from all points of view in a sound, scientific and well presented style.

I MOSAICI DI PALESTRINA, by GIORGIO GILLINI. 53 pages, 28 plates (most in color). Istituto di Archeologia ed Etruscologia, University of Rome 1956 (Archeologia Classica, Supplement I) 3500 lire

Essential for the study of Roman mosaics. The recent reconditioning of the famous Sanctuary of Fortuna at Praeneste has greatly aided the understanding of its three extensive mosaic pavements. Considerable further expanses have been revealed of the floors

in *opus signinum* incorporating irregularly shaped bits of colored stone, now generally identified as the *lithostrotia* of Pliny (*Natural History* 36, 184 and 189). The fish mosaic has been freed from modern constructions and incrustations which had hampered appreciation of its significance. The great Nilotic mosaic which had been taken to Rome for safekeeping during World War II has now been installed in the museum, and the opportunity taken to ascertain what areas are due to modern restoration; important technical and chronological conclusions have thus been reached.

LES HOMMES DE LA PRÉHISTOIRE: Les Chasseurs, by ANDRÉ LEROI-GOURHAN. 128 pages, numerous text figures, charts, maps. Editions Bourrelier, Paris 1955

A small and very general study of prehistoric man, describing both the anthropological development and the archaeological sequence of successive paleolithic cultures. A brief discussion of the nature of prehistoric deposits and the methods of excavating them and of interpreting the material is introductory to the main text.

AN INTRODUCTION TO ANGLO-SAXON ENGLAND, by PETER HUNTER BLAIR. 382 pages, 5 figures, 16 plates, 9 maps. Cambridge University Press, New York 1956 \$5.50

This excellent history of England from the last days of Roman rule to the beginnings of the Norman Age is dealt with in terms of the invasions of the Anglo-Saxons, Danes and Vikings. Attention is given to the role of the church in the rise of Anglo-Saxon civilization, and to the development of government and economy.

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